TEXTILE WORLD

A McGraw-Hill Publication — JULY • 1951

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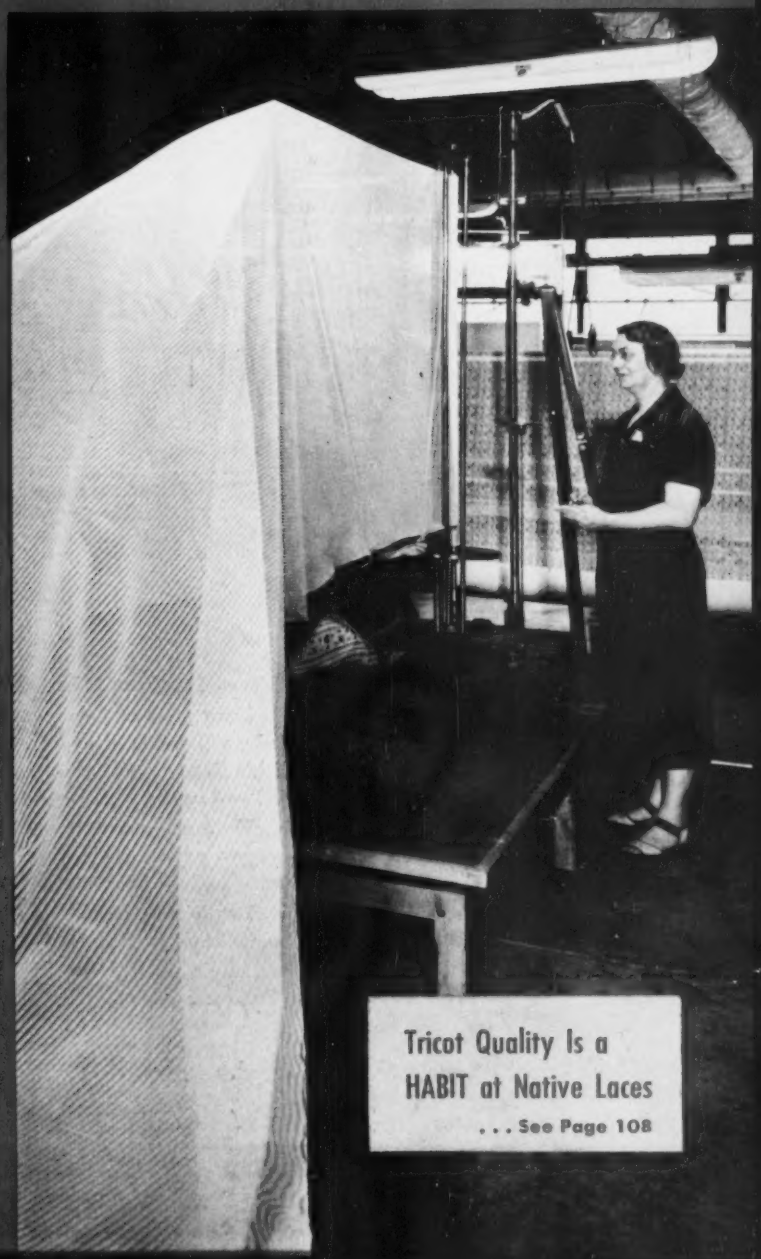

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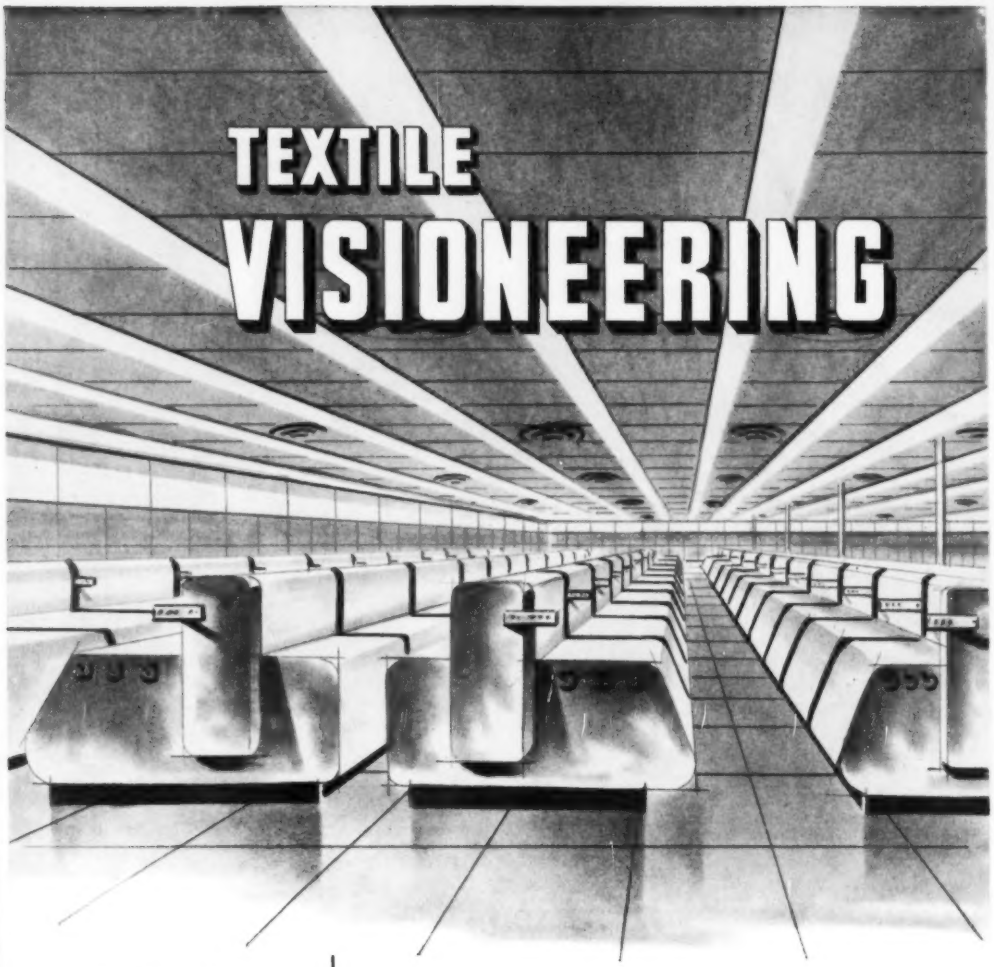

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ATLANTA

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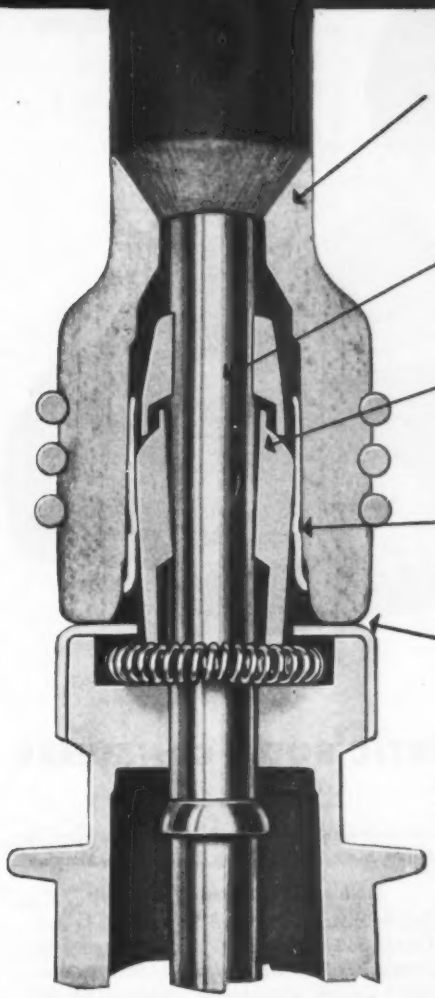

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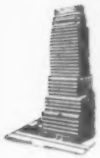

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SPINNER WEAVER KNITTER FINISHER ENGINEER

JULY, 1951

Vol. 101 No. 7

KEYED ACCORDING TO READER INTEREST

COTTON SYNTHETICS WOOL

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THE *Long-Range* VIEW

Good Work—Let's Keep It Up

Five years ago a group of foresighted cotton-manufacturing executives formed the Textile Committee on Public Relations.

These men sensed early the power of public moral indignation and conversely the fact that good business performance will be publicly appreciated. A survey of public attitudes toward the cotton-textile branch of the industry stressed the need for a public-relations program and helped set the sights for the committee's work.

Basically, there was a need to correct public misconceptions about the cotton-manufacturing branch of the textile industry, its workers, and its working conditions. The program was designed to call public attention to five major points:

1. The economic importance of the industry to the nation as a major, free American industry producing essential goods and providing thousands of jobs.
2. The progress of the industry in research, training, and modernization.
3. The job opportunities and good working and living conditions being offered throughout the industry.
4. The high caliber of the people who work in the industry.
5. The social benefits contributed by mills through sponsorship and support of health services and cultural, educational, and recreational programs in their communities.

The impact of the efforts of Textile Information Service, operating arm of the committee, cannot be measured accurately. But the efforts themselves can be.

In the five years it has been working, TIS has built up a sound opinion-influencing organization throughout textile-producing areas. In these five years it has:

- Distributed 810 news stories (as of May, 1951) that have been published in about 2,500 newspapers.
- Circulated pictorial exhibits about the industry that have been viewed by an estimated 2,000,000 people.
- Distributed 148,979 copies (as of March, 1951) of eight booklets on community relations, the open house, careers in the textile industry, etc.
- Built up the circulation of *Textile Neighbor*, a magazine-type "house organ" for industry employees, to 10,000 copies per issue.
- Completed numerous special news projects, speeches to public and club meetings, special magazine articles, radio broadcasts, and other miscellaneous activities.

Such a volume of information cannot help having a favorable effect on public opinion.

By following a policy of disseminating reliable and accurate facts, and only facts, not slanted propaganda, TIS has earned the confidence of editors and wire services. The wire services in particular depend frequently on the Information Service for coverage of cotton-industry meetings, etc. Releases from the services are printed without attribution to their source —a deep compliment indeed to the service from the press.

Even more important than the work of the Service with the press is its work with the mills themselves. For to be able to write about good community and industrial relations, such relations must exist and grow. The Service, through booklets, manuals, and personal conferences, has helped develop good community and human relations.

In these five years the worth of TIS has been proven. Its work has been valuable and its program is foresighted. It is a unique and splendid example of how an industry recognized and met its responsibilities to its communities, its workers, and the free-enterprise system.

But these five years are only the foundation. The surface of work to be done has only been scratched. As one example, in spite of all that has been written about the value of employee handbooks and good employee-induction practices, one authority estimates that only 5% of the mills have such handbooks and carry out such practices.

In spite of the fact that the entire cotton-manufacturing branch is benefiting from the information program, only slightly more than half of the total number of cotton manufacturers is supporting it. The Service is also not supported at all by the woolen, worsted, and synthetic branches.

The program is good. The ideas spread forward to the public and backward to the mills are sound. We urge full support by all branches so that the job that ought to be done can be done.

William A. Newell

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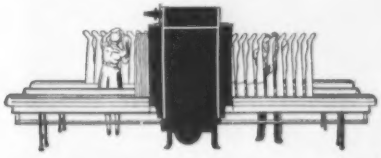

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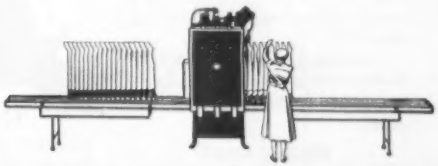

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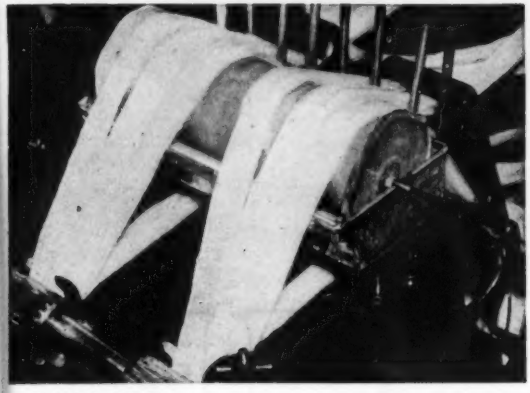

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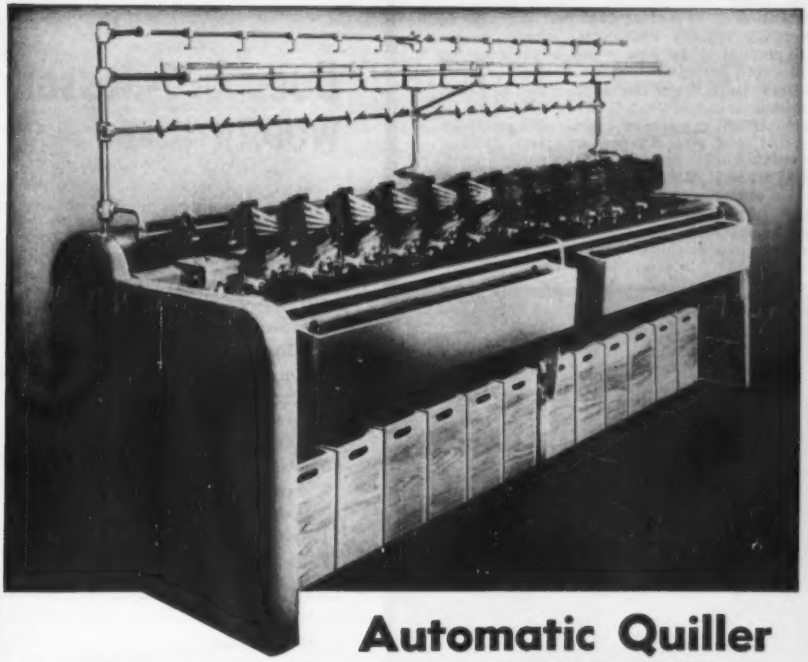


Automatic Quiller

"AUTOCOPSER"

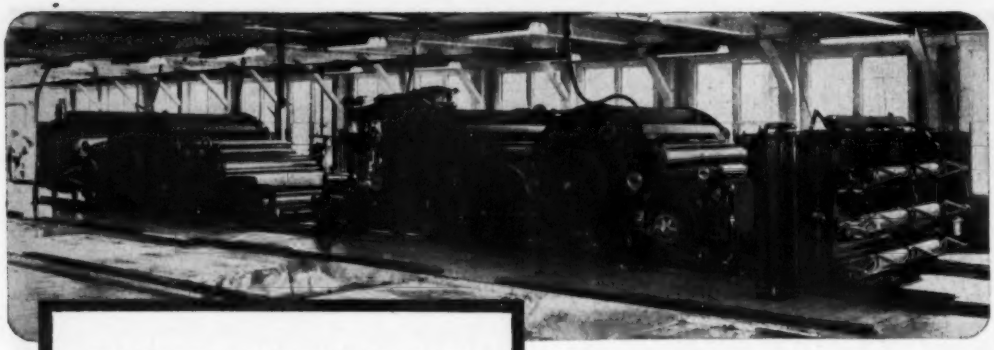
For speeds up to 10,000 REVOLUTIONS PER MINUTE

• • •

20 Years Experience in Automatic Quillers

For Particulars write to

W. SCHLAFHORST & CO · M. GLADBACH · GERMANY



Shown here: 3-cylinder set, with Peralta Machine. Also available in 2-cylinder and 4-cylinder sets.

Duesberg-Bosson Automatic Card Feeder

SIZE: either 78¾" or 72¾" wide, to match the dimension of the carding machine.

IMPROVED FEEDING MECHANISM: enables weight and settings to be kept within a minimum for prolonged periods.

HOPPER: large. Giant size hoppers can be had if desired.

SPIKE APRON: constructed entirely of metal, with tapered steel pins. Take-up sprockets maintain tautness.

SPIKE APRON STRIPPING COMB: heavy duty type, precision made, accurately balanced; not subject to vibration or backlash at stripping comb speeds.

SCALE PAN: sensitive weighing device automatically prevents overweighing of stock.

Duesberg-Bosson
WOOLEN CARD

Many advantages are being obtained by every woolen mill using this *modern carding machine.*

1. Substantially greater production.
2. Noticeably improved quality.
3. Greater blending of fiber and colors, due to increased doublings.
4. More uniformity of roving.
5. Increased lengths of fiber can be used.
6. Card flyings and waste held to a minimum.
7. Less re-workable waste.
8. Vibration practically eliminated.
9. Less down-time. Fewer repairs.
10. Lower power requirements.
11. More efficient lubrication.
12. Less capital investment.

CATALOGUE AVAILABLE ON REQUEST

For those who may be interested in seeing tangible evidence *on their own stock* of the superiority of the Duesberg-Bosson Card, we shall be glad to demonstrate the operation of this card. We will process sample lots at our mill, **Duesberg-Bosson Woolen Spinning Company** at Jefferson, Massachusetts (near Worcester). At this mill we are in a position to pick, card, spin, and wind on cones.

Duesberg-Bosson of America, Inc.

Manufacturers of Woolen Machinery, Developed from a Background of Over 115 Years

FITCHBURG ★ MASSACHUSETTS

Low-cost product improvement with CHEMIGUM latices

YOU can add chemical resistance, water resistance, and the ability to withstand greases, oil and abrasion to textiles with the "family" of CHEMIGUM LATICES developed by Goodyear. Equally important, you need no costly solvent recovery systems when you use the CHEMIGUM LATICES, because they are aqueous dispersions, and relatively low in cost.

Right now, CHEMIGUM LATICES are in short supply. But now is the time to evaluate them in your own laboratory. So look over the table of typical characteristics in the panel—decide for yourself that CHEMIGUM LATICES are worth your immediate investigation. Then write today for full details and samples for laboratory use to:

Goodyear, Chemical Division, Akron 16, Ohio

TO HELP YOU EVALUATE CHEMIGUM LATICES

	CHEMIGUM LATEX 101A*	CHEMIGUM LATEX 200	CHEMIGUM LATEX 235A**	CHEMIGUM LATEX 245A**
Approx. Monomer Ratio	45/55 (Bd/S)	70/30 (Bd/Ac)	55/45 (Bd/Ac)	67/33 (Bd/Ac)
Total Solids, %	54-59	53-57	30-35	30-35
Particle Size (Angstrom Units)	2000-2500	2000-2500	1000-1500	1000-1500
pH Range	10.0-12.0	10.0-12.0	10.0-12.0	10.0-12.0
Surface Tension (dynes/cm)	30-40	30-40	30-40	30-40
Viscosity (cps)	20-50	20-50	10-30	10-30
Specific Gravity (dried solids)	0.98	0.98	0.99	0.98
Film Mooney (small rotor)	50-90	40-60	25-45	25-45
Added Stabilizer	NH_4-Soaps	NH_4-Soaps	NH_4-Soaps	NH_4-Soaps
Antioxidant	Non-staining	Non-staining	Non-staining	Non-staining
Weight per gallon, lbs.	8.2	8.2	8.3	8.3
Color	White	White	White	White
Mechanical Stability	Good	Good	Good	Good
Storage Stability	Very Good	Very Good	Very Good	Very Good
Ash Content, %	1.0 max.	1.0 max.	1.0 max.	1.0 max.

**Also produced without antioxidant as CHEMIGUM LATEX 101AX and with higher solids and different stabilization as CHEMIGUM LATEX 101E.*

***Both CHEMIGUM LATICES 235A and 245A are available in "B" or "C" grades which have the same basic properties but differ in solids content or stabilization.*

USE PROVED *Products*

GOODYEAR

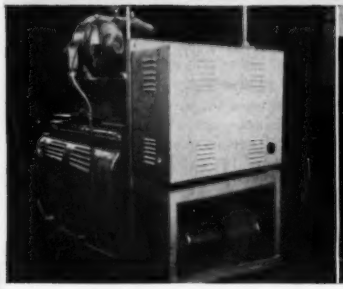
Chemigum—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

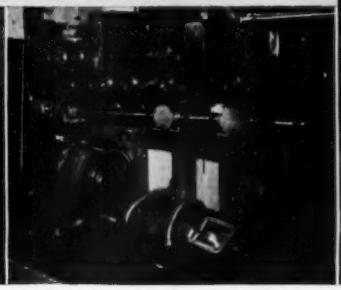
Century SELECTIVE SPEED Drives

Permit Exact Speed Control for Increased Production • Better Quality Control

Here are a few typical applications

that demonstrate the benefits which you can get from Century Selective Speed Drives on either new equipment or your present set-up.

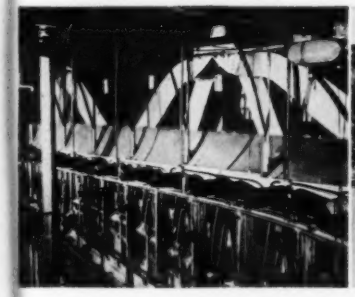


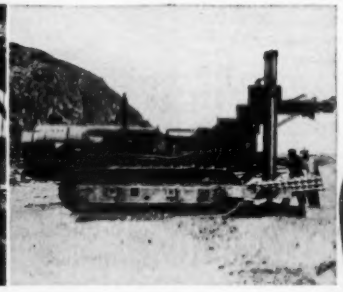


Production increased, machining quality was improved, accuracy is held closer and set-up time is reduced as a result of achieving optimum peripheral cutting speeds on this boring mill.

Costs are cut and scrap is reduced because maximum speeds are easily controlled for different classes of work done on this printing press. Accurate control maintains exact register of multiple copy forms.

Better quality control is maintained over production of latex threads because of the wide selection of speeds plus smooth acceleration and deceleration. Extreme flexibility permits fast change-over when a new gauge, or size, of rubber thread is to be produced. Instant stopping is also an important protective feature.





Uncoilers and coilers with pinch rolls and looping device, require a wide range of inter-related automatic sensitive speed changes. As the coils of material unwind from one spool and wind on another spool, the diameters change yet the speed through the electrolytic process must be at a constant rate.

Operating speeds are instantly controlled on this earth auger drill rig. Permits operator to change speeds according to the type of earth being drilled. Drilling is done to depths of 100 feet in strip mining.

For more details on Century Selective Speed Drives, from 1 to 150 horsepower, call the Century office nearest you. Your local Century representative can also furnish information on the complete line of Century motors, from ½ to 400 horsepower.

CENTURY ELECTRIC CO.

1806 Pine St. • St. Louis 3, Missouri

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Century Electric Company is celebrating its 50th year in the electrical industry

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LC	Bearing Load Computation (Part IV)
AP	Application Procedure (Part V)
LF	Full Scale Drawings of Bearings
H	Tables, formulae, bearing principles, load computation, bearing installation
	MAINTENANCE AND SERVICE
SP	Service Procedure for Ball Bearings
R	Interchangeable Replacement Bearings
FW	Front Wheel Adjustment Chart
	GENERAL
S	Standard Catalog (Handbook, Vol. I)
BI	Explanation of numbering system
D	Sealed bearings (Discussion of Principles)
IB	Sealed Bearings with provision for relubrication
BM	How Steel Balls Are Made
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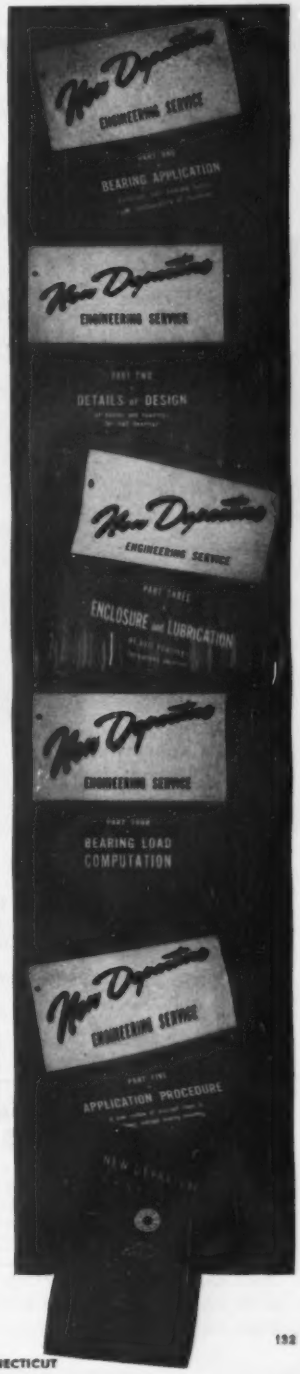

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BALL BEARINGS

Nothing Rolls Like a Ball

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NEW DEPARTURE • Division of GENERAL MOTORS • BRISTOL, CONNECTICUT

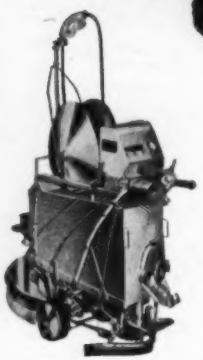
NEW SCRUBBER-VAC

Cuts Cleaning Time 2/3

FOR SMALL-AREA MILLS

- Specially designed for buildings with 2,000 to 15,000 sq. ft. of floor space
- Applies the cleanser, scrubs, rinses, and picks up in ONE operation
- Also handles the dry work — steel-wooling, polishing, et cetera
- Can be leased or purchased (leasing budgets cleaning expense)

Now the labor-saving advantages of *combination-machine-scrubbing* are available to small as well as larger mills. The *new 418P Finnell Scrubber-Vac*, for small-area buildings with 2,000 to 15,000 sq. ft. of floor space, cleans floors in *approximately one-third the time* required with a conventional 15 or 18-inch scrubber-polisher using separate equipment for picking up. A *Finnell Scrubber-Vac* speeds cleaning by handling four operations in one! It applies the cleanser, scrubs, rinses if required, and picks up (damp-dries the floor) — all in a single operation.



Of narrow design, the *new 418P Scrubber-Vac* also meets the need in larger mills for a combination machine that can be used in congested areas, narrow aisles, and weave room alleys. All the refinements of *Finnell's* larger combination machines are embodied in this smaller unit (18-inch brush ring). Has new type of water valve that *assures* uniform flow of water ... powerful vacuum for efficient pickup (performs *quietly*) ... a *Finnell-developed* trouble-free clutch ... self-winding cable reel ... improved waterproof wiring and minimum electrical connections, simplifying the cleaning of the machine ... G. E. Motors and Timken Bearings. The machine is self-propelled — operator merely *guides* it. Supplied with or without powder dispenser. Incidentally, it's good to know that when you choose *Finnell Equipment*, a *Finnell* man is readily available to help train your maintenance operators in its proper use.

SEE IT IN ACTION ON YOUR OWN FLOORS!

Find out what you would save with a *Finnell Scrubber-Vac*. *Finnell* makes several models and sizes. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 1907 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

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SANDOZ PRESENTS *The color achievement of the month*

Beach Beige ...in UNIDURE®

Well suited for sunwear is this smart young lady.

And so is UNIDURE, United Piece Dye Works' wrinkle-resistant finish which gives fabrics *permanent* crispness despite repeated dry-cleaning or laundering.

But the use of such finishes demands dyestuffs which will not only survive cleaning but will take the mill finishing treatment without harm.

Among the very few dyestuffs which are *not* affected in shade or fastness-to-light by such processing are Sandoz PYRAZOL Fast Blues FLL, 2 GLN, LUL, RUL, GUL, FGL and PYRAZOL Yellow RSW, Orange 4G, Green 4BL, Brown BRL, Violets 2R and 4BL.

To this list of colors which have already proved themselves for use with wrinkle-resistant finishes, we have recently introduced the following for such work:

PYRAZOL DISCHARGE YELLOW G
PYRAZOL DISCHARGE BROWN G
RESOFIX RUBINE BLN
CUPROFIX RUBINE FBL
RESOFIX BLUE GL

For *any* chrome, acid or direct dyes ... or auxiliary chemicals ... for both natural and synthetic fibres ... be guided by the successful "color achievements" you see in these Sandoz advertisements.

DIRECT-DYE COTTON AND RAYON WITH CONFIDENCE IN WASH FASTNESS!

New Sandoz CUPROFIX colors and after-treatment give fastness to washing, light, etc., that formerly required more expensive vat dyeing. Write for booklet on CUPROFIX, already adopted by dozens of mills.

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Only One Wool Oil Supplier Offers You All This!

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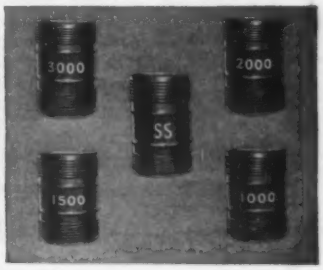
2. **ENGINEERING REPORT...** After analysis, S/V engineer prepares report, with recommendation of correct wool oil.



3. **PROVED PRODUCTS...** Recommended from complete line, meeting all degrees of scourability and discoloration resistance.

4. **LABORATORY SERVICE...** Technicians in S/V laboratories make tests of mill samples to control performance on the job.

5. **PROGRESS REPORTS...** Show efficiency of fiber lubrication, make recommendations for still further improvement.

Why accept less for your mill?

There's no mystery about which wool oil is best for your operation when you call in Socony-Vacuum. Our fiber lubrication service and complete line of *S/V Woolrex Oils* assure your use of the right product—*on a price-performance basis!* Why not get all five benefits of this exclusive wool oil service?

Process Products
SOCONY-VACUUM

SOCONY-VACUUM OIL COMPANY, INC.
Chemical Products Division, 26 Broadway, New York 4, N. Y.

Socony-Vacuum Process Products

Maintenance Men:

Cut down paper work!

No need to search catalogs, put all your mill supplies on one order to Atkinson, Haserick & Co. We will ship every item in the quickest possible time. Make us responsible for stockroom replacements *and* rush parts. Mail, wire or phone your troubles to us.

Get all mill supplies on one order!

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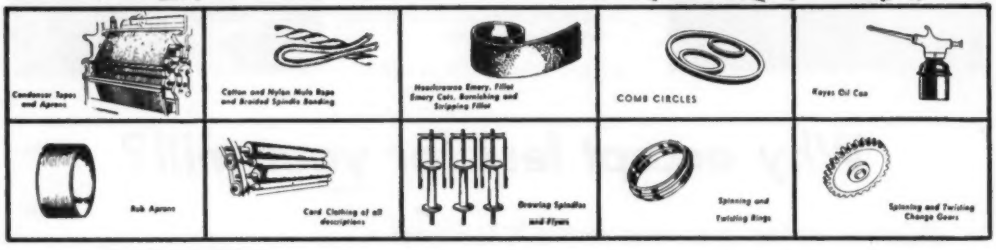
Chains for Cotton Flat Cards
Clearer Plush
Comb Aprons
Comb Circles
Comb Pins: Cotton & Worsted
Condenser Aprons
Condenser Tapes
Doffer Comb Blades
Drawing Fliers
Drawing Spindles
Emery Cotts
Emery Fillet
Gears, Change, all types
Gill Box Aprons
Kaye Oil Cans
Lubricators, Arragg Spindle
Mule Rope, Cotton
Mule Rope, "Columbian" Nylon
Parchment, Textile
Porcupines
Porcupine Pins
Rings: all types
Roller Chain & Sprockets
Roller Felt
Rub Aprons
Spindles: Rabbeth & Ball Bearing
Tapes: Twisting & Spinning
Thread Spools, Wooden
Top Rolls: Ball Bearing & Ordinary
Yarn Guides, Plastic and Porcelain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Kayes Oil Can
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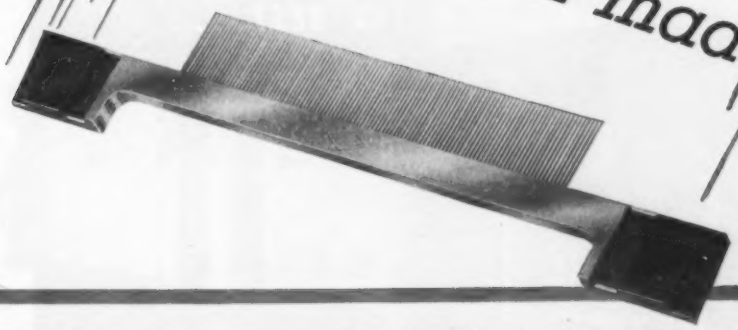
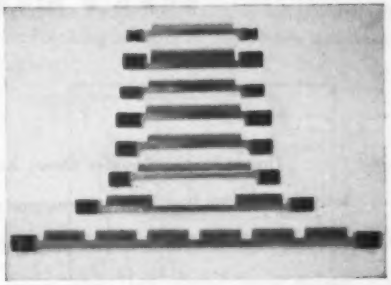
the toughest faller made!



HOLDSWORTH

Keeps Gill Boxes Running



Holdsworth Fallers are made for the maximum speed of every type of gilling process. Only Holdsworth Fallers carry the ◈ trade-mark on solid steel middles through which are driven firm, round pins . . . Pins anchored in steel, stay in line! Hardened tool steel ends are butt-welded to an unvarying length to reduce vibration and screw wear. When Holdsworth Fallers are interchangeable and so inexpensive, how can you afford not to use the best? We will even send you a free sample, upon request.

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THE ORIGINAL DRYER of this type and still THE BEST....

...Produces a lofty stock with low steam consumption

The patented Counter Flow- Air Circulating System delivers a cool, evenly dried, lofty wool with low steam consumption. *Aireflow's* streamlining, inside and out, keeps maintenance low and allows for easy accessibility. May we send you more data on drying wool, cotton, flax, rags or any similar materials?

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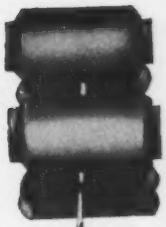
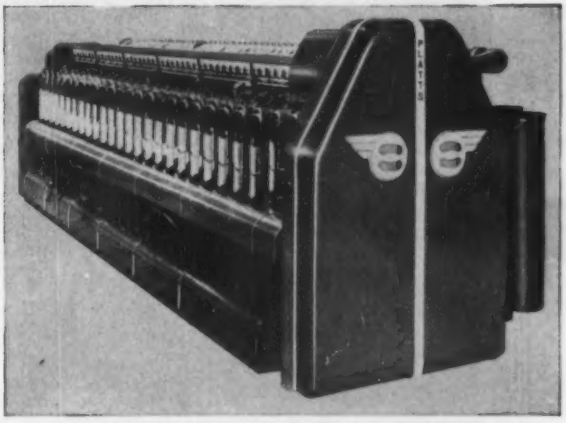
STRONGER ROVING
fewer ends down...

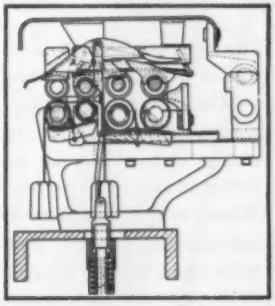


New Patented Hartley Flyer inserts more twist between the top of the flyer and the nip of the front roll. A stronger roving results with a higher production and a lighter work load.



PLATT'S M·S·2 HIGH DRAFT ROVING FRAME

At our Charlotte display rooms, you can see the M.S.2 Frame in operation and examine its well engineered features: The headstock is neat, compact and smooth in appearance, allowing easy access to the gearing and twist change-gears. The silent spindle and bobbin drive has a chain drive to the spindle and bobbin shafts with helical cut gears to each individual spindle and bobbin. Balance of bobbin rails, centralized lubrication, roller gearing, roller weighting, assisting rollers, measuring motion controls, guards and locking motions have all been well designed to be compact and accessible.



The TRIZONA (Trade-Mark) Drafting System employs a progressively controlled drafting which is the answer to the problem of fiber control in each critical drafting field. The patented guide units provide complete control of the fibers. The three drafting zones permit a wide range of drafts. We would be glad to send you a very interesting twelve page booklet with detail illustrations and comparative graphs of roving regularity.

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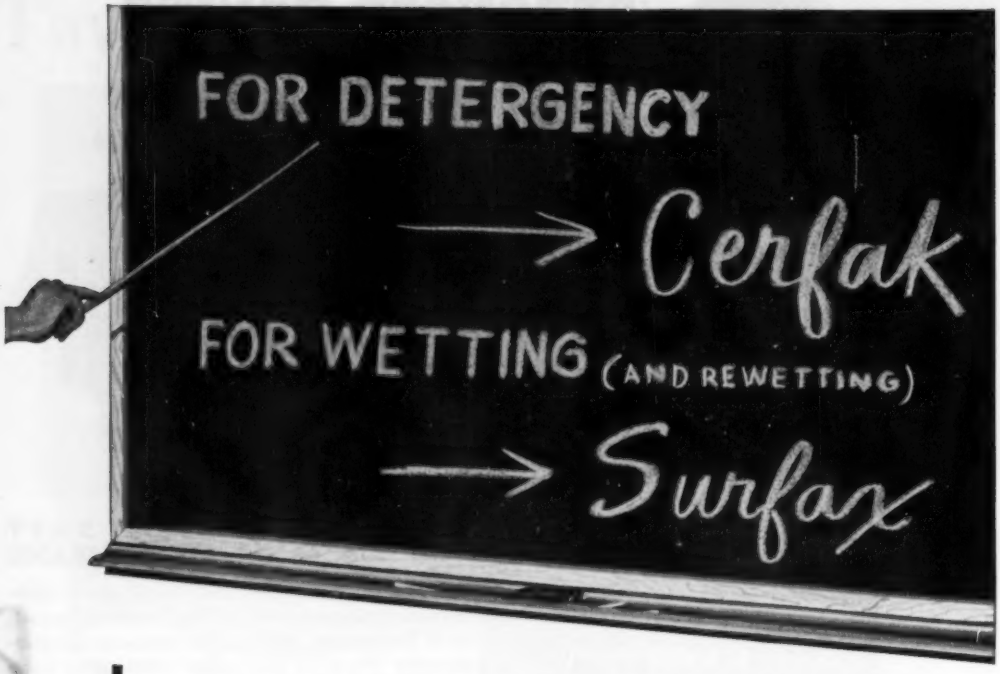

It's easy to remember... for Wet Processing, rely on these two Houghton brands!

The entire Houghton line of surface active agents is identified by two trade names —"Cerfak" and "Surfax." When *detergency* is the chief factor in your processing, pick one of our seven "Cerfak" products and you'll be right every time. When you want exceptionally good wetting and rewetting power, a "Surfax" agent will solve your problem. In applications where *both* detergent and wetting action are needed, there's a "Cerfak" available for excellent results.

Many textile mill men are using the Houghton Chart in choosing surface active agents for specific processing jobs. It was developed after fifteen years of textile research by Houghton engineers. It will help you choose the agent with detergent and/or wetting properties for any mill application. We will gladly send you one of these charts. Write to E. F. Houghton & Co., Philadelphia 33, Pa.

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. . . products of

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ASK THE HOUGHTON MAN to show you how "Cerfak" and "Surfax" concentrated products are improving quality at lower cost for many mills.

Ready to give you on-the-job service . . .

For more information, write direct or use Reader Service post card.

COTTON RING SPINNING FRAME

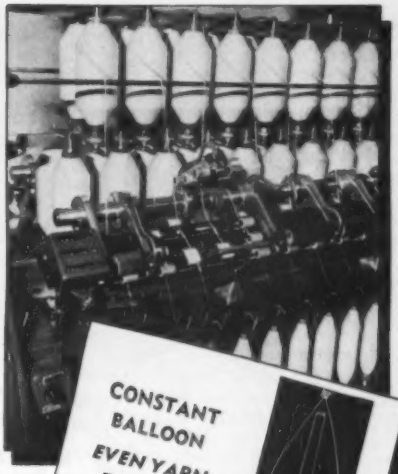
The only frame with

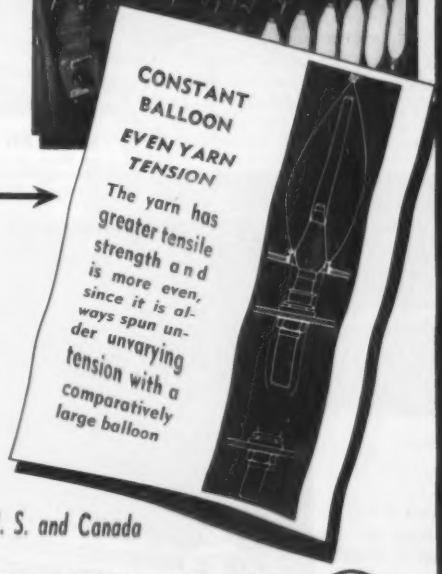
(1) *Pneumatic weighting for drafting arrangement*

which offers you the advantage of an easy adaptation of the top roll pressure to suit any stock to be processed.

Instantaneous pressure release by the mere opening of an air valve; saves cots over longer stops.

Simplified design of drafting arrangement owing to the entire absence of caps.




CONSTANT BALLOON
EVEN YARN TENSION
The yarn has greater tensile strength and is more even, since it is always spun under unvarying tension with a comparatively large balloon

and
(2) *Moving Spindle rail* →

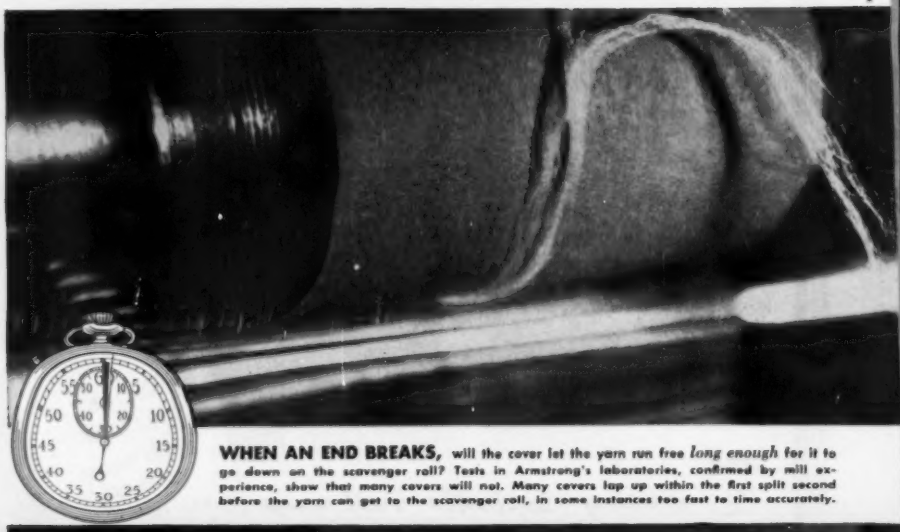
for the formation of *large packages* thus effecting considerable savings in the subsequent winding process. Larger ring diameters and longer lifts are only feasible if the differences in the yarn tension remain within practicable limits. The action of the movable spindle rail equalizes the differences in the yarn tension throughout the entire build of the cop.

Sole Agents in U. S. and Canada

AMERICAN TEXTILE ENGINEERING, INC.
ARLINGTON, NEW JERSEY, U. S. A.

No. 1 of a series introducing Rieter Products to the Textile Industry

A Stop Watch



WHEN AN END BREAKS, will the cover let the yarn run free *long enough* for it to go down on the scavenger roll? Tests in Armstrong's laboratories, confirmed by mill experience, show that many covers will not. Many covers lap up within the first split second before the yarn can get to the scavenger roll, in some instances too fast to time accurately.

THE LONGEST time any cover lets the yarn run free is consistently recorded by Armstrong's Accotex® Cots. In thousands of tests they let the yarn run free long enough for it to go down on the scavenger roll . . . in many cases it runs free indefinitely. Diagrams and pictures at right show why Armstrong's Accotex Cots have such high lap resistance.

shows which cover resists lapping best

IN measuring the lap resistance of a roll cover, the critical question is this: Will the cover let a broken end run free *long enough* to go down onto the scavenger roll?

In cot development work, it's important to get the answer to that question fast. That's why the textile section of Armstrong's Research Laboratory developed the stop watch test. This test gives them the comparative lap resistance of different cot compounds in minutes instead of months. At the same time, experience has proved that a cover that shows up well on this test also demonstrates superior lap resistance when it's installed in a mill.

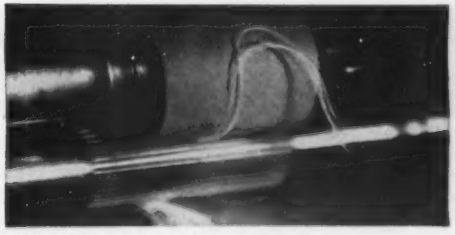
Here's how our research workers make the stop watch test. First, they put a cot on a frame section from which the scavenger roll and clearer board have been removed. Next, to make the test even more rigid, they speed up the frame many times faster than normal. Then they break an end and measure with a stop watch how long the cot will let the end run free.

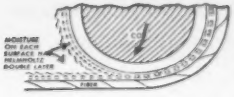
The longer the end runs free, clearly, the better chance it would have of going down on the scavenger roll in the mill . . . the more lap resistant the cover. In thousands of these tests against the stop watch, Armstrong's Accotex Covers consistently prove to have more lap resistance than any other cover made today.

The secret of this high lap resistance is in the patented formula of the Accotex Cover. Every Accotex Cover contains electrolytes . . . a certain special ingredient that eliminates one of the principal causes of lapping, the natural attraction between cot and fiber.

Because no single cover formulation is best for all spinning conditions, Armstrong offers you a complete line of straight synthetic, and cork-and-synthetic Accotex Covers.

Ask your Armstrong representative to suggest the right Accotex Cover for your mill or work. Call him today for complete information or write Armstrong Cork Company, Textile Products Department, 8307 Arch Street, Lancaster, Pennsylvania. Available for export.





THIS COT LAPS: Moisture layers on fiber and cot contain electric charges that attract fiber to cot. When pressed together, the two moisture layers have effect of adhering fibers to cot.

THIS COT RESISTS LAPPING: Certain electrolytes put in patented Accotex Covers neutralize electric charges in moisture layer on cot. This cancels out the basic attraction of fiber to the cot.

ARMSTRONG'S ACCOTEX COTS

You get practical help
on lubrication and maintenance problems

when the Gulf Lubrication Engineer *is in the picture*

One of the best sources of help on any problem that involves lubricants or lubrication is a trained Gulf Lubrication Engineer.

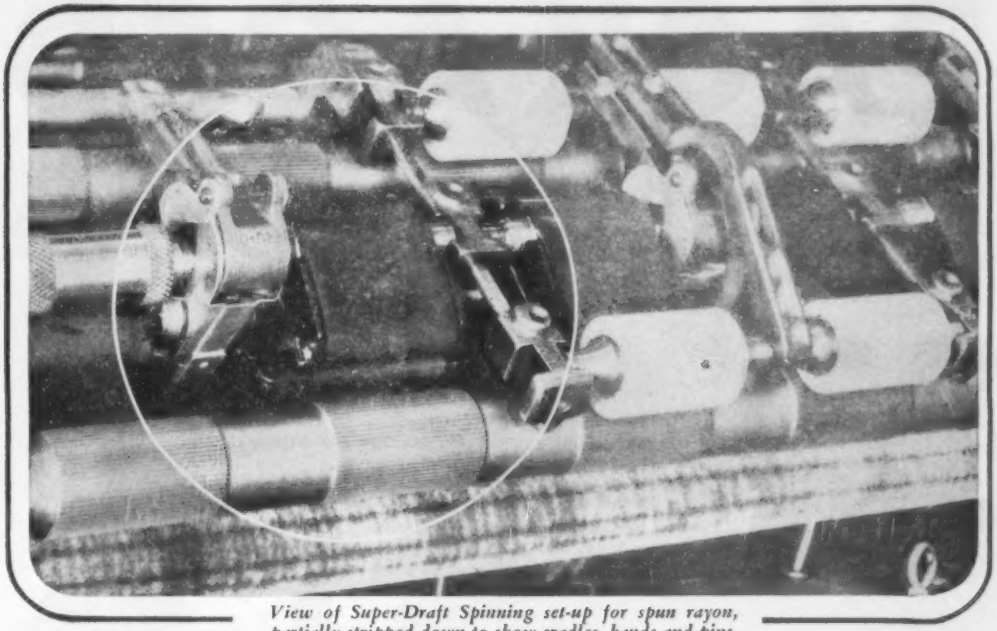
Gulf Lubrication Engineers are experts in petroleum technology—they are familiar with refining processes, properties, and the past performance records of various types of lubricants. They completely understand the effect of different operating conditions on lubricants. And, just as important, they know the lubrication requirements of all types of textile equipment. The application of this knowledge and experience to each individual problem helps reduce maintenance costs and improve performance.

To get the benefits of this expert engineering service for your equipment, call in a Gulf Lubrication Engineer today. Write, wire, or phone your nearest Gulf office. Gulf Oil Corporation · Gulf Refining Company, Gulf Building, Pittsburgh 30, Pennsylvania.

FIFTY YEARS OF SERVICE
1901 GULF 1951
PETROLEUM AND ITS PRODUCTS

WHITIN Super-Draft *Spinning*

-another example of Progress through Research!



View of Super-Draft Spinning set-up for spun rayon, partially stripped down to show cradles, bands and pins.

Our latest development — Super-Draft Spinning — is but another example of progress through research at Whitin.

Introduced to the industry in 1950, it has proved to be very successful in actual mill operation. Conservative figures show that on cotton, drafts up to 40 for combed stock and up to 30 for carded stock have been easily reached. Drafts on spun rayon have been increased comparably.

The use of an improved cradle assures better fiber control, resulting in higher quality yarns of greater strength and evenness. Short fibers are controlled closer to the nip of the front rolls. In the final analysis, Whitin Super-Draft spinning can pay you big dividends in lower costs, reductions in amount of card room equipment required, less creeling in the spinning because of coarser roving required and larger packages used, and increased labor productivity.

In these critical days, production at top speed is vital. New developments which may increase your output should be looked into without delay. We invite your investigation of Whitin Super-Draft Spinning.

Super-Draft Spinning is standard equipment on new spinning frames. It is also available as a full changeover or as a partial changeover on present long draft spinning installations of all types.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANSBURG, S. C. • DEXTER, ME.

Now—save with a PACKAGED G-E Slasher Drive

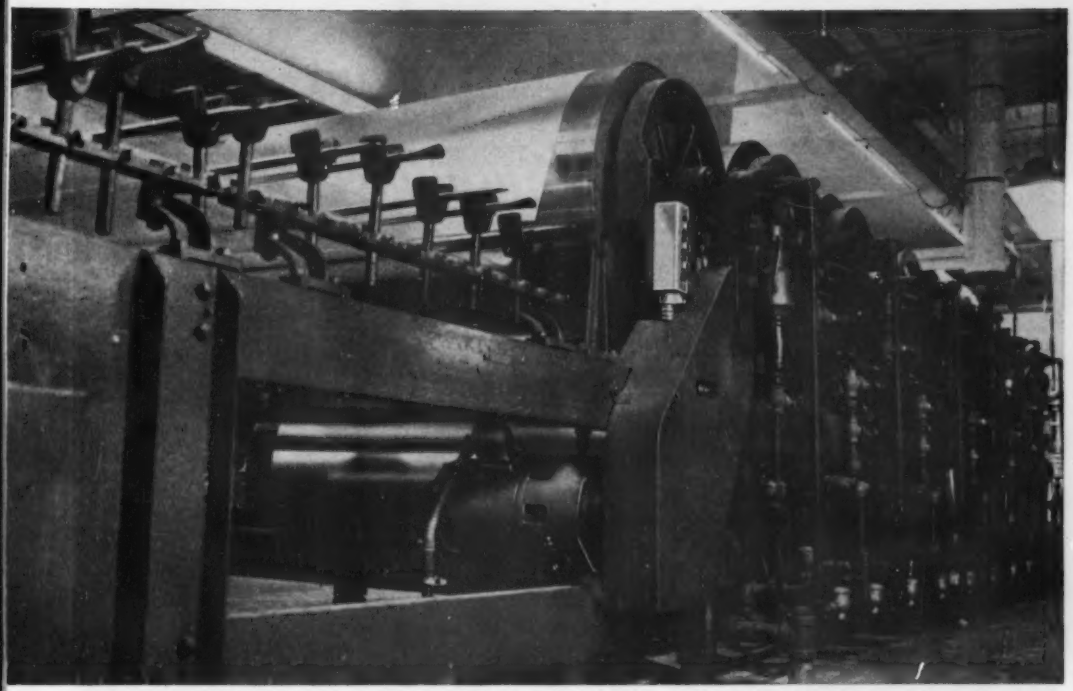
Here's all you need!

A packaged G-E slasher drive consists of only (1) any required number of d-c driving motors with their associated rheostats, (2) operator's control stations which can be put wherever is most convenient, and (3) a "package" containing everything else—motor-generator set, exciter, and all control—which can be remotely located to save space around the slasher.

GENERAL ELECTRIC

654-17

For more information, write direct or use Reader Service post card.



G-E amplidyne-controlled 4-motor drive provides operating speed of 12 to 60 yards per minute for this synthetic yarn slasher in the William Skinner and Sons Co. mill in Holyoke, Mass. View from windup end shows one of four G-E 1½-hp gear-motors driving the drying cylinders. Operator can start and stop the drive from the drying section, if necessary, by means of the push-button station shown above motor.

—in first cost, installation, floor space, and maintenance!

All the advantages you've liked in the General Electric multi-motor slasher drive are now also available to you in this new packaged G-E drive that cuts your costs four big ways:

You save on first cost substantially—because mass production of standardized parts reduces unit costs.

You save on installation because the factory-assembled power "package" needs no special foundation, contains all wiring between components except to the remotely-mounted motors and operator's controls.

You save on floor space because motor-generator set, exciter, and all control are housed in one compact unit.

You save on maintenance because all components in the power unit are easily accessible; dust, dirt, and lint are prevented from entering the power unit by large ventilating-air filters.

Both G-E slasher drives—packaged and separate-unit type—use the same performance-tested adjustable-voltage d-c speed control teamed up with amplidyne tension control. Both give you the same **automatically controlled** warp tension for most efficient slasher operation. **The payoff? Uniform high-yardage warps, fewer ends down at the loom, higher weave-room efficiency!**

Ask your machinery manufacturer or your G-E textile-mill specialist about all the operating and cost-saving features of packaged G-E slasher drives. Meanwhile, send for Bulletin GEA-5259 on standard G-E slasher drives. **General Electric Company, Schenectady 5, N. Y.**

SLASHER DRIVES FOR TEXTILE MILLS

Ask your G-E representative to arrange a showing of "Textiles Unlimited." It's G-E's full-color sound movie on how textile mills are modernizing—a More Power to America presentation.

Made to last —they're Stainless Steel

Stainless Steel dry cans manufactured by The Textile Shops, Spartanburg, S. C.

HOW MANY TIMES in recent months have you stopped in front of a vital piece of mill equipment and said to yourself, "I'm glad it's Stainless Steel."

If you are one of the hundreds of operators who have taken full advantage of the benefits of Stainless Steel, you are well equipped for the uncertain days ahead.

Stainless Steel's exceptional corrosion resistance makes it the ideal material for jobs where not the slightest amount of rust can be tolerated. Its smooth surface is hard, dense and easy to clean. "Down-time" for cleaning is reduced by use of Stainless Steel since its surface remains unaffected by dye pigments, or finishing agents. And today, with equipment replacements so difficult (and sometimes even impossible), you'll appreciate more than ever the long service life that Stainless Steel assures.

Include Stainless Steel equipment in your plans for the future. By using U·S·S Stainless Steel wherever and whenever possible, you make sure you get a perfected, service-tested material that has proved unsurpassed for keeping equipment on the job.

AMERICAN STEEL & WIRE COMPANY, CLEVELAND · COLUMBIA STEEL COMPANY, SAN FRANCISCO
NATIONAL TUBE COMPANY, PITTSBURGH · TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM · UNITED STATES STEEL COMPANY, PITTSBURGH
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USS

U·S·S STAINLESS STEEL

SHEETS · STRIP · PLATES · BARS · BILLETS · PIPE · TUBES · WIRE · SPECIAL SECTIONS

UNITED STATES STEEL

The disc holders shown above, fitted with Jenkins Discs, are for Jenkins Check, Globe, and Angle Valves. Two have guide disc nuts. One, at extreme right, is fitted with throttling nut.

Now, when *continuous valve efficiency* is vital . . . you can rely on readily available Jenkins Renewable Composition Discs to provide the valve protection that greatly extends service life. Proper disc selection and replacement in time guard against premature wear, can multiply the original efficiency of valves many times over.

Disc replacement is simple and easy, can be done without removing valves from the line. To save more time, maintenance-wise valve users keep on hand a stock of disc holders fitted with the discs most commonly used.

Only Jenkins makes *both* Valves and Discs

Originator of the first successful Renewable Composition Disc, Jenkins Bros. has continued to set quality standards. That's why you can rely on your Jenkins Distributor for discs of time-tested design and composition, plus authoritative disc information.

Ask your Jenkins Distributor for the folder, "A Guide to Correct Disc Selection" . . . also the "Jenkins Disc Selector", a handy wall chart listing recommended discs for all common services, temperatures, and pressures. Or write Jenkins Bros., 100 Park Ave., New York 17. Jenkins Bros., Ltd., Montreal.

Money-saving idea for disc-valve maintenance

Keep on hand a stock of disc holders fitted with the discs most commonly used. This permits quick replacements, saves valuable time.

Slip off the disc holder with the old disc, and slip on another containing the new disc.
When you have time, reload the old disc holder with a new disc.

Sold through leading Industrial Distributors everywhere

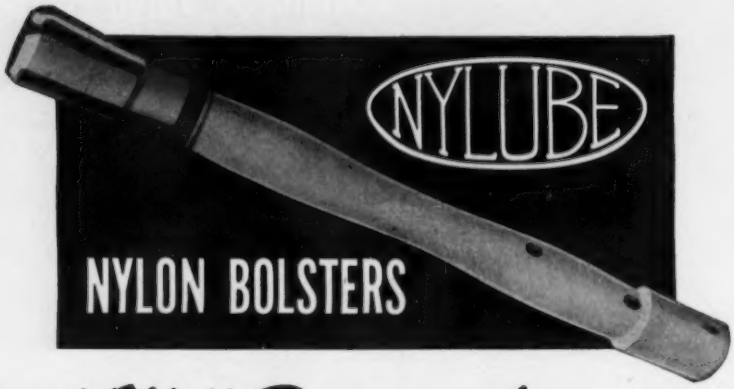
JENKINS
LOOK FOR THE DIAMOND MARK
VALVES
SINCE 1864 TRADE JENKINS MARK

Jenkins Bros

 For more information, write direct or use Reader Service post card.

Save POWER

Save OILING



Actual Mill Reports show:

SPINDLE HORSEPOWER REDUCTIONS UP TO 15%

#1 . . . . "9.59% Spindle HP reduction"
#2 . . . . "11.87% Spindle HP reduction"
#3 . . . . "6.8% Spindle HP reduction"
#4 . . . "14.3% Spindle HP reduction"

OILING REQUIRED ONLY 1/4 TO 1/15 AS OFTEN

#1 . "Every 5 weeks instead of every week"
#2 "Every 12th week instead of every 10 days"
#3 "Once per month instead of once per week"
#4 . . . . "We oil at 6 month intervals"

Running with far less friction, and a measured 10° cooler, no "Nylube" Bolster has worn out during four years of mill use. In addition to their immediate and direct savings in power and oil and oiling effort, there are the long-swing advantages of 90% reduction in spinning tape mortality, better running yarn, elimination of spindle base flushing.

At present available for Saco-Lowell #2a, 3a & 4a Spindles, and for Whitin #2 & #4 Spindles. *Your inquiry will have our prompt attention.*

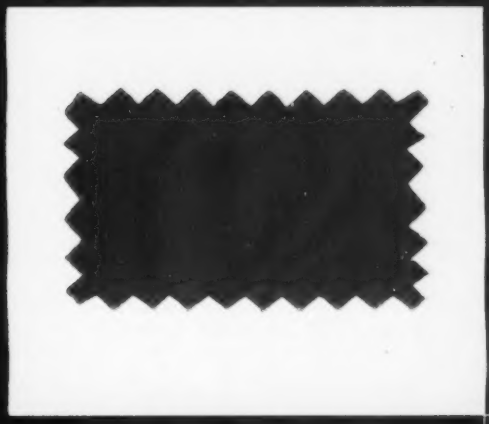
MODERNIZE WITH "NYLUBE" AT LITTLE COST—QUICKLY REALIZE SUBSTANTIAL SAVINGS

NYLON BEARINGS, INC.

21 VERNON ST., WHITMAN, MASS.
Northern Sales: Richard K. Butler, Box 428, Whitman, Mass.
Southern Sales: Watson & Desmond, Box 1954, Charlotte, N. C.

to meet the high fastness-standards of American military specifications and quality civilian markets.

Has so many excellent attributes for dyeing loose wool, (particularly tippy wool), slubbing, yarn and piece goods that every dyer should have a good supply at hand for both military and civilian orders.



Ask for NATIONAL BULLETIN 347 giving complete data, together with dyeings on yarn and piece-goods.

Write, wire or phone the nearest National Aniline office for prompt service on this versatile color.

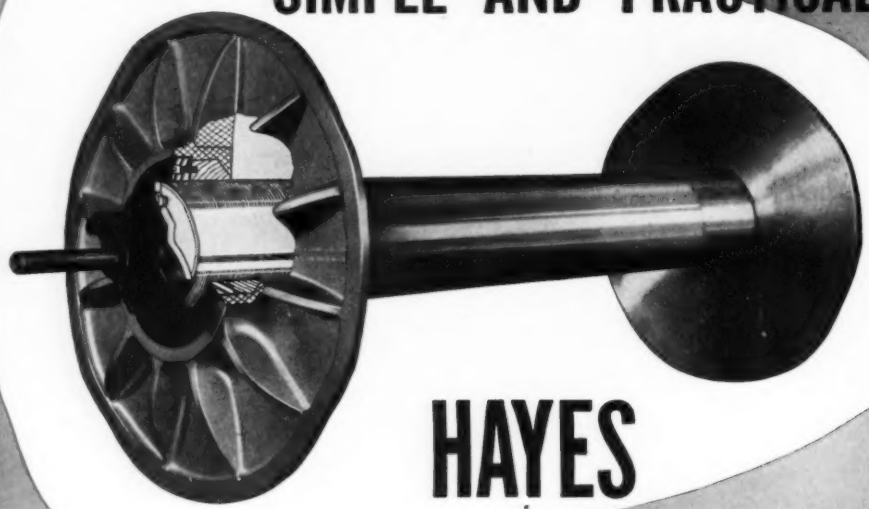
NATIONAL ANILINE DIVISION

ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR STREET NEW YORK 6, N.Y. BOwling Green 9 2240

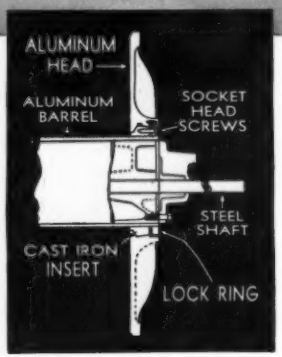
Printed in U.S.A.

new! SIMPLE AND PRACTICAL!



HAYES

ADJUSTABLE LOOM BEAMS



Sectional drawing of New Locking Device — simple — strong — stays put.

NOW, for the first time you can have the most practical, Adjustable Loom Beam yet devised. It is simple, easy to adjust and locks in any position. To secure the head in place, you simply tighten the socket head screws evenly on the locking mechanism. No special tools are required. The new and very simple built-in locking device shown at the left gives you greater head strength, *with no reduction in yarn space.* Here is a New, Adjustable Loom Beam that is strong and sturdy in construction, is accurately made and stays true indefinitely, and of course does not rust. *Yet it is so light in weight that two men can lift it into the slasher with ease!*

NOW, you can have the benefit of years of research, now you can have all the advantages of the conventional adjustable loom beam plus light weight, strength and accuracy never before achieved. Hayes produces Adjustable Loom Beams for all standard looms. Write for Catalog 100, on Hayes Beams. Due to present material curtailments, we may not be able to ship your Beams as quickly as you or we would like. We will however, do our best to fulfill your requirements.

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HAYES

INDUSTRIES, INC.,
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IS A SYMBOL OF THE HIGH EFFICIENCY OF GERMAN MAKERS OF TEXTILE MACHINERY IN THE FIELDS OF

SPINNING
WEAVING **FINISHING**

DECADES OF EXPERIENCE AND THE COOPERATION OF LEADING GERMAN MACHINE MAKERS ENABLE US TO PLAN AND ERECT COMPLETE TEXTILE PLANTS

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Friedrich Ebert-Str. 22 **Germany** **Telephone 41512**

Lincoln

Centralized Lubrication

DORR WOOLEN CO.
MANUFACTURERS
GUILD, N.H.

March 10, 1950

Lincoln Engineering Co.
8 St. Mary's Street
Boston, Mass.

Gentlemen:

We have had the Lincoln Centromatic System installed on our frames since we purchased them and we are more than satisfied with its performance.

Two or three things which we noticed which might be of interest to you. One is the increase in Traveler life over what we expected. From what information we can gather from nearby mills using the same type of frames and same yarns, our Travelers are lasting from three or four times as long. We have no down-time required for oiling and our frames are much cleaner as a result of this installation. As a result of the effective lubrication, we notice a marked reduction in ends down.

The maintenance on this system is negligible to date and, in short, we would be pleased to recommend it to anyone contemplating installation.

Yours truly,
DORR WOOLEN COMPANY
President

GAD, Jr:P

Saves Increases

Centro-Matic Lubrication System installed on (14) 120 Spindle Whitin Spinning Frames at Dorr Woolen Co.

Close-up view of Lincoln Centro-Matic injectors installed on Whitin Spinning Frames at Dorr Woolen Co.

Close-up view of Whitin Spinning Frame showing how injectors on each rail section are supplied with lubricant independently from the main supply line down through center of frame.

Lincoln's Centralized Lubrication Provides

Lincoln's Lubrication System specialists will work with you and recommend the time and money saving Centralized Lubrication System best suited to your equipment. Phone or write

Right Automatically

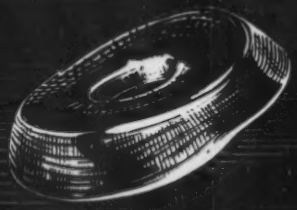
SEE OUR CATALOG IN SWEET'S

• • • PIONEER BUILDERS LINCOLN LUBRICATING EQUIPMENT • • •

LINCOLN ENGINEERING COMPANY • 5742 Natural Bridge Avenue • St. Louis 20, Mo.

DISTRIBUTED NATIONALLY THROUGH LEADING INDUSTRIAL WHOLESALERS LOCATED IN PRINCIPAL CITIES

Here's one . . .



. . . and there are 10,000 more!

FOSTER MACHINE COMPANY
Westfield, Mass., U. S. A.

Southern Office, Johnston Bldg., Charlotte, N. C.; Canadian Representative, Ross Whitehead & Co., Ltd., 1475 Mountain St., Montreal, Que., European Representative, Muschamp Taylor, Limited, Manchester, England.

That's right . . . each week an average of 10,000 small parts, like this disc tension washer, are specially treated to give you longer wear from a Foster Winder — more machine for your money.

These parts are first copper plated . . . buffed on special machines . . . and then nickel plated before inspection and assembly. Copper plating and buffing help close the surface pores of the metal and prevent pitting. The copper also serves as a bond for the nickel and prevents it from peeling off.

In addition, before being painted all Foster Winder die castings also undergo special treatment to prevent oxidation.

These are just two of the many steps in building a Foster machine which are aimed directly at reducing upkeep and improving the quality of yarns wound on them.

Does it pay off? Less spotty yarn — less subsequent fabric seconds tell part of the story. Part replacement at rates as low as $3.50 per 100-spindle machine per year tell another. For the *complete* story on Foster winders — write today.

FOSTER F WINDERS

QUALITY WINDERS FOR ALL TYPES OF YARNS

For more information, write direct or use Reader Service post card.

To users of **CLIMAX Ball Bearing Top Rolls**

here is your

SERVICE KIT

containing complete equipment for:

— buffing

— re-covering

— greasing

BUFFING — Climax Ball Bearing Top Rolls are precision buffed, without disassembling, by a compact attachment which fits standard buffing lathes and can be used for solid rolls as well.

RE-COVERING — Climax Ball Bearing Top Rolls are re-covered on standard cot applying machines, by means of a simple pressure bracket. Re-covering is done without disassembling the roll.

GREASING — Climax Ball Bearing Top Rolls require periodic greasing only at extremely long intervals. The Kit provides a special pressure attachment for greasing the ball bearings thoroughly and uniformly. A supply of Climax grease is included.

Each Service Kit is made up individually to give your Mill just what is needed for the Climax Rolls you have. Further information upon request.

Climax Ball Bearing Top Rolls adopted by

Whitin

MACHINE WORKS

and supplied on Whitin machinery as standard where anti-friction rolls are required. Climax Rolls are available through Whitin Machine Works and all of their agents.

MACHINECRAFT, INC.

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Charlotte, N. C.

Brazil:
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Caixa Postal 5904
Sao Paulo, Brazil

Mexico:
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Avenida, Uruguay 55
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For European Service:
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Only **CLIMAX**

among anti-friction rolls, permits INTEGRAL RECOVERING and INTEGRAL BUFFING—WITHOUT DISASSEMBLING.

Climax Ball Bearing Top Rolls are made for

- Cotton System Spinning Rolls for all standard and long-draft systems
- Cotton System Roving Rolls
- American System Worsted Rolls
- French and Bradford Worsted Rolls
- Wool Spinning Rolls

Climax Rolls are custom-made to suit your equipment and your weighting requirements.

FOR YOUR DEFENSE REQUIREMENTS-

CHEMICALS
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INC.
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DYESTUFF MANUFACTURERS SINCE 1917

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DYER S. MOSS, Southern Representative

1879

* Reg. U. S. Pat. Off.

for faster, easier stripping use

TUFFER Hand Cards clean your rolls quickly with firm, yet flexible, teeth! They bite smoothly and evenly—their strength and durability mean greater stripping efficiency, less effort and arm strain, and less time lost for stripping! Whether it's Midgley's Improved or Howard's Special, you're using the best when you use TUFFER Hand Cards.

Midgley's Improved Hand Stripping Card

Indestructible backs and handles . . . Steel clamps protect edges of the card and hold them securely to the back.

Howard's Special Hand Stripping Card

Ruggedly constructed. Made of three-ply indestructible wood for strength and lightweight. Pressed steel handle.

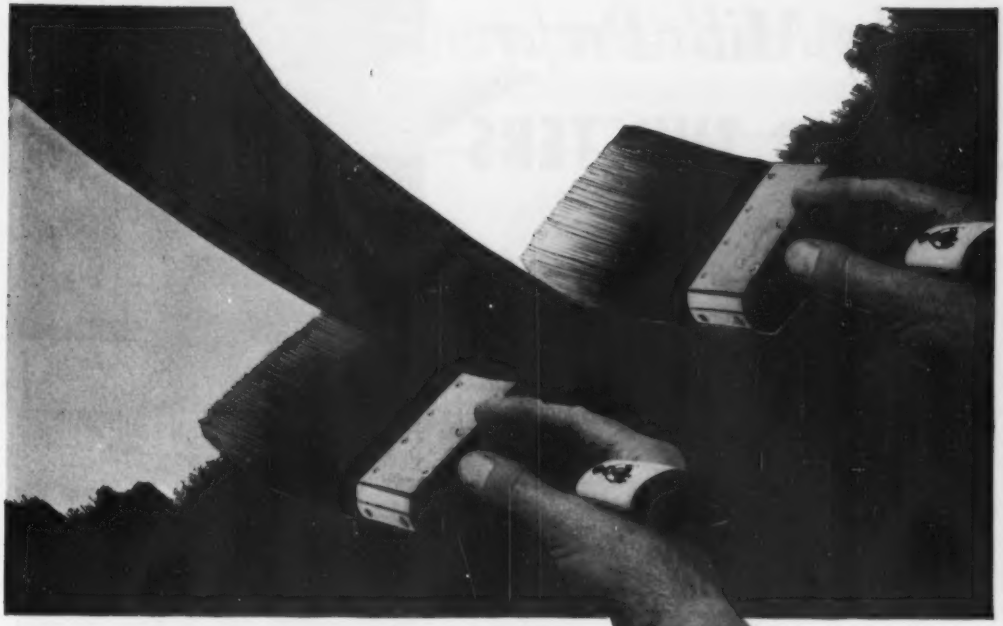
HOWARD BROS. MFG. CO.

WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C. **Branches:** Philadelphia, Pa. and Blanco, Texas
Direct Representation in Canada

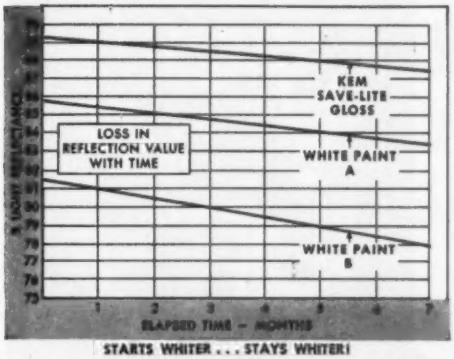
A-7

TUFFER CARD CLOTHING *IMPROVES PRODUCTION ALL ALONG THE LINE*



MAKE THIS TEST

before you paint your plant!


% LIGHT REFLECTANCE
LOSS IN REFLECTION VALUE WITH TIME
KEM SAVE-LITE GLOSS
WHITE PAINT A
WHITE PAINT B
ELAPSED TIME – MONTHS
STARTS WHITER . . . STAYS WHITER!

Note how the whiteness, or reflective value, of Save-Lite *starts* higher than conventional finishes when first applied, and *continues* higher, as time goes on. This means *longer* intervals before repainting is required.

Compare KEM SAVE-LITE with ordinary whites

SEE why it stays cleaner—longer!

See for yourself the difference there can be in the whiteness of "white" finishes . . . even when they are first applied! Make a side-by-side comparison of KEM SAVE-LITE Mill White against conventional white finishes on any wall surface in your plant.

You can see the difference, from the start, in gleaming, brilliant whiteness...a difference because of the *controlled,* light-reflective properties that are designed into SAVE-LITE Mill White Finishes.

KEM SAVE-LITE *starts* whiter . . . KEM SAVE-LITE *stays* whiter, as the actual light reflectometer measurements in the comparative chart show. You'll find these same properties, too, enable it to hide better and cover farther! Call your Sherwin-Williams representative today for a demonstration, or write The Sherwin-Williams Co., Cleveland 1, O. (Division Offices, Charlotte, N. C. and Boston, Mass.)

SHERWIN-WILLIAMS

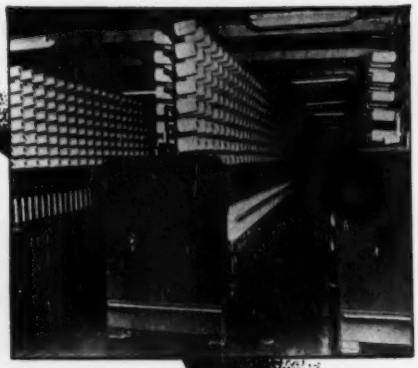
INDUSTRIAL MAINTENANCE FINISHES

SAVE-LITE MILL WHITE • COLOR HARMONY FINISHES

MILL VILLAGE PAINTS

Why Mills Prefer

H&B TWISTERS

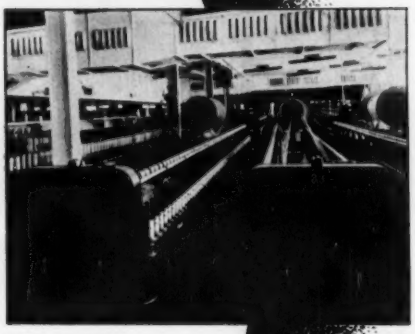


PACKAGE TWISTER

H & B Twisters are built ruggedly — and exactly — to exact specifications for producing high quality finished yarn with an even twist.

They deliver a firm, well-shaped package, carrying the maximum yardage permissible within the natural limits imposed by traverse and ring diameter. Whether the yarn is twisted for duck, top quality broadcloths, gabardines or sewing thread, you can count on the final quality of the twisted yarn, as well as the safety, ease and economy of operation of the machine. Among the many features that assure trouble-free run-off in subsequent yarn operations are:

1. *The ball bearing thrust washer in the builder drive that prevents dwelling at the top and bottom of the stroke and particularly aids high-speed winding.*
2. *Wet twisters are equipped with an automatic water feed control that maintains the same level in troughs, assuring even water penetration.*
3. *Replaceable bottom roll bearings to reduce maintenance cost.*

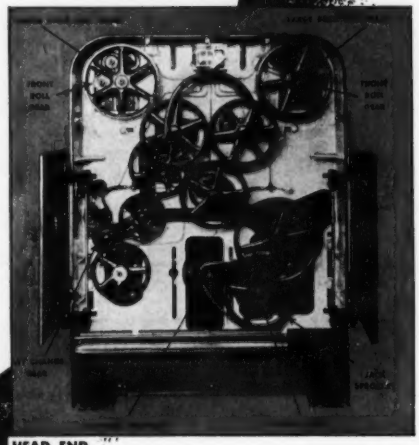


BEAM TWISTER

Supply packages on H & B Twisters can be beams as well as cones or tubes. Beam stands have ball bearings and a brake assembly which assures uniform and even tension let-off. Superstructure can have one or more beams. The shift to single beam operation is accomplished by moving one set of beam stands to the center position.

HEAD END FEATURES:

1. *All cut gears throughout.*
2. *Silent chain drive from cylinder to jack shaft.*
3. *Electric stop motion prevents starting of machine when doors are open.*
4. *Bijur lubrication system.*
5. *Doors swing open and away, making head end easily accessible for gear changes.*



HEAD END

Ask to have an H & B Sales Representative call with the complete story of H & B quality twisting. Contact the main or a branch office — today.

H&B AMERICAN MACHINE CO.

FACTORY, EXECUTIVE OFFICES AND EXPORT DIVISION • PAWTUCKET, R. I., U. S. A.
Branch Offices: Atlanta, Ga. — 815 Citizens and Southern National Bank Bldg.
Charlotte, N. C. — 532 West 4th Street
Greenville, S. C. — 1510-11 Woodside Bldg.

Builders of MODERN TEXTILE MACHINERY

For more information, write direct or use Reader Service post card.

Save machinery wear and tear

Cutaway shows simple, rugged construction of Link-Belt Fluid Drive.

LINK-BELT Electrofluid Drive with constant CUSHION ACTION

Here's why your machinery and motors last longer with CUSHION ACTION —

SMOOTH ACCELERATION — CUSHION ACTION smoothly and gradually loads the motor even on heavy inertia loads. Motor approaches maximum torque before output shaft revolves.

OVERLOAD PROTECTION — Even if driven machine jams, rotor inertia is isolated. Torque applied is limited to fluid drive capacity — no need for mechanical break-pins.

SHOCK ABSORPTION — CONSTANT CUSHION ACTION minimizes shocks and torsional vibrations. That means longer life for your motor and driven equipment. And because shock load service factors can be disregarded, you can use smaller, less expensive power transmission equipment.

LOW STARTING CURRENT — Motor starts instantly — accelerates to 70% of full-load speed before engaging load — takes less than half normal starting current with less heating.

HIGH STARTING TORQUE WITHOUT OVERPOWERING — Because motor accelerates free of load, it reaches maximum pull-out torque that might otherwise require a special type of oversize motor.

The Link-Belt Electrofluid Drive comes to you in a "packaged" unit with NEMA mounting and shaft dimensions to facilitate ready installation. Book 2385 has complete information on five types of Link-Belt Fluid Drives — Electrofluid Drive, Electrofluid Gearmotor, Fluid Drive, Fluid Gear Drive and Fluid Coupling Drive.

LINK-BELT

FLUID DRIVES

LINK-BELT COMPANY: Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Springs (South Africa). Offices, Factory Branch Stores and Distributors in principal cities. 12,377

NON-FLUID OIL

TRADE MARK REGISTERED

55 Years of Lubrication Progress

April 21, 1896-1951. As we celebrate our 55th anniversary of lubrication service to industry, it brings to mind the saying, "It must be good to be where it is today." During this terrifically competitive period of industrial expansion, the unique drip-less, waste-less properties of NON-FLUID OIL, and its ability to provide cleanly, dependable and economical lubrication, have enabled this product to keep pace with the lubrication needs in all phases of U. S. industry.

Huge petroleum mergers have been the order of the day during the first half of the twentieth century. NON-FLUID OIL has been able to survive and flourish in the shadow of this "sheer bigness" because of its higher efficiency and greater economy than ordinary oils and greases—aside from its cleanly features.

NON-FLUID OIL is made in grades exactly suited to the lubrication of all types of textile machinery.

Send for instructive bulletin and free testing sample of NON-FLUID OIL.

NEW YORK & NEW JERSEY LUBRICANT COMPANY

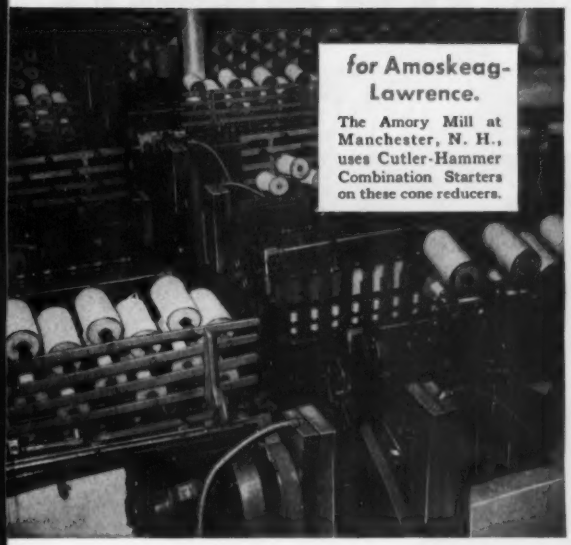
292 Madison Ave., New York 17, N. Y. Works: Newark, N. J.

WAREHOUSES: Atlanta, Ga. — Birmingham, Ala. — Charlotte, N. C. — Chicago, Ill. — Columbus, Ga. Detroit, Mich. — Greensboro, N. C. — Greenville, S. C. — Providence, R. I. — St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture.

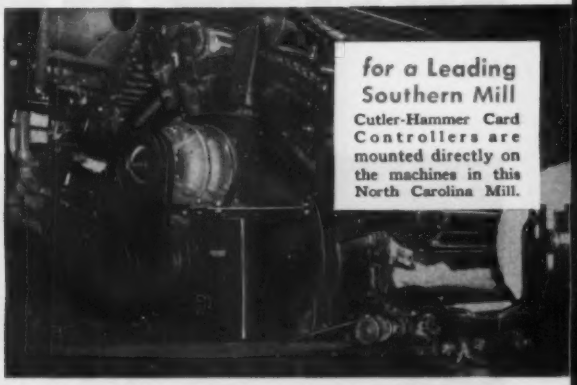
CUTLER-HAMMER

MOTOR CONTROL FOR THE TEXTILE INDUSTRY



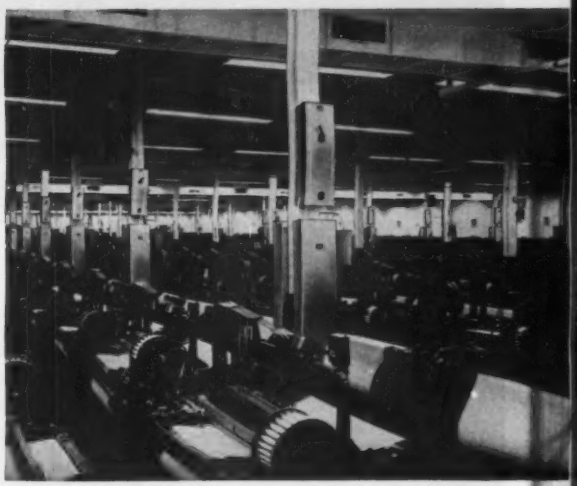
for Amoskeag-Lawrence.

The Amory Mill at Manchester, N. H., uses Cutler-Hammer Combination Starters on these cone reducers.



for a Leading Southern Mill

Cutler-Hammer Card Controllers are mounted directly on the machines in this North Carolina Mill.



One question that answers itself

No responsible textile mill executive will decide the question "*What* motor control?" except in the light of *one fact*. And that is the fact that *profitable* textile production results from the integration of many machines into a single harmonious production unit. The need for such integration spells out the answer to the question right there. For this integration certainly calls for the *best* motor control engineering experience available . . . certainly calls for the *most competent* motor control design and construction available . . . certainly calls for a *proved dependability* in motor control performance. There is only one make of motor control that meets all these specifications, the product of the pioneering specialists in motor control since 1892. CUTLER-HAMMER, Inc., 1457 St. Paul Avenue, Milwaukee 1, Wisconsin.

CUTLER-HAMMER
MOTOR CONTROL
C-H

for Springs Cotton Mills

at Kershaw, S. C., plant. Cutler-Hammer Loom Switches for each group of 10 looms are here mounted in single enclosures on adjacent building columns above mill traffic. Note also single combination starter installed ahead of each group.

CUTLER-HAMMER LOOM SWITCH

for fewer shutdowns, greater production, easier maintenance

Pushbuttonoperation—most preferred for this type of starter. Stop button can be padlocked.

Stronger, smaller, drawn steel case. Unique welded-steel mounting pedestal available to create a *complete* assembly with unparalleled resistance to mechanical damage.

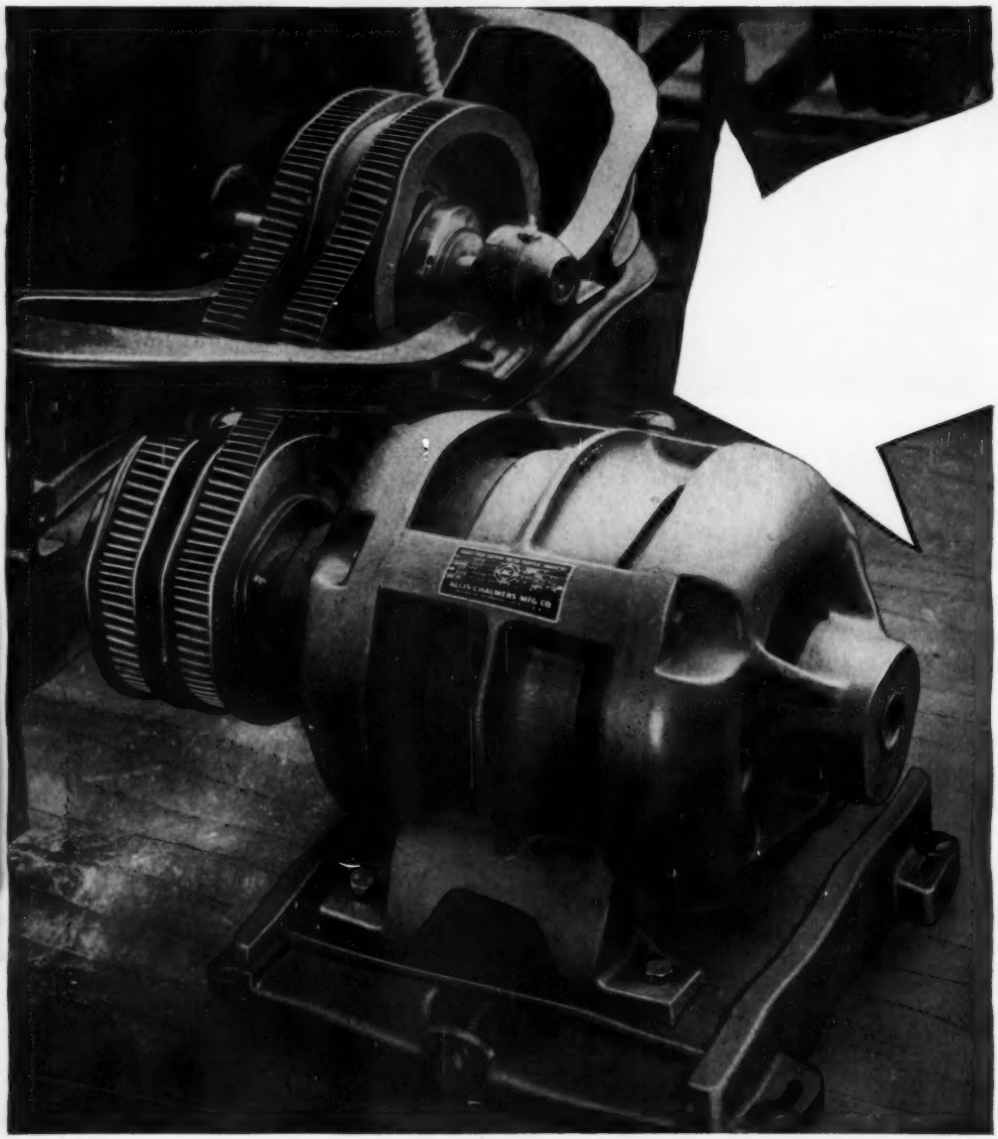
Lint-proof enclosure—close fitting cover (even around pushbutton well) limits entrance of lint and dust.

Service proven, positive make, quick break operating mechanism built on *steel* framework.

"Out in the open" contacts for quicker inspection and easy renewal *on the job*. Most dependable overload protection—famous Cutler-Hammer eutectic element type—prevents unnecessary shutdowns without sacrifice of *positive* motor protection.

Vibration resistant. Mechanism "floats" in truly effective *live* rubber mounting bushings.

LINT IS NO PROBLEM



for This Motor

Quick-Clean TEXTILE MOTOR

Ordinary motors in lint-laden atmospheres have trouble . . . overheating — *high maintenance costs — burnouts.* *Quick-Clean* motors avoid these expensive troubles because lint and dirt cannot accumulate on or inside the motor.

MATCH QUICK-CLEAN MOTORS WITH ALLIS-CHALMERS STARTERS

Developed for dependable, safe starting of *Quick-Clean* motors. Other controls for all electrical equipment in your plant. For competent applications engineering, see your Allis-Chalmers Authorized Dealer or write District Office.

QUICK-CLEAN WIDE OPEN DESIGN allows powerful fans to sweep lint and dirt in, out and away with the cooling air. Interior surfaces are smooth and hard. Large air passages are contoured to aid air flow. There is no place where lint and dirt can collect.

Cast Iron Frame

The frame of the *Quick-Clean* motor is rigid cast iron which resists the corrosive action of moist mill atmospheres. Cast iron maintains perfect alignment under all normal operating conditions assuring maximum bearing life and trouble-free operation.

Factory Lubricated Bearings

Bearings are lubricated and sealed at the factory and should need no attention for years. Grease or oil cannot leak from the bearings to soil materials or collect dirt. Lint and dirt cannot enter the bearings.

Get The Facts

Your nearest Allis-Chalmers Authorized Dealer or District Office has complete information on the *Quick-Clean* motor. Or write Allis-Chalmers, Milwaukee 1, Wisconsin for the bulletins shown below. A-3396

SEND FOR FREE LITERATURE

Quick-Clean Motors	51B6055
Allis-Chalmers Loom Motor	51B7111
Texrope Drives	20B6051
Vari-Pitch Automatic Sheaves	20B7223
Power Generating Equipment, Transformers, Circuit Breakers, Power Distribution Equipment	25B6150

Quick-Clean, Texrope and Vari-Pitch are Allis-Chalmers trademarks.

COMPLETE SERVICE from power line to machine

Transformers

Motor Control

Motors

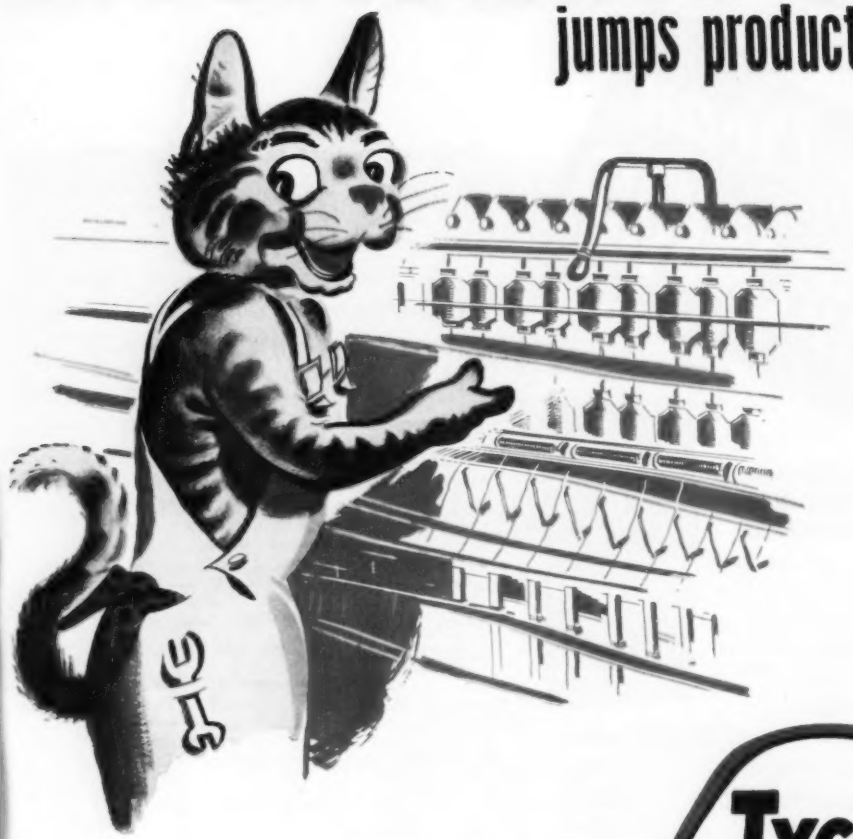
Texrope Drives

A-C ALLIS-CHALMERS

ALLIS-CHALMERS

Originator of the Multiple V-Belt Drive for the Textile Industry

"Tycol Alweave cuts spindle drag... reduces thread breakage... jumps production"



Right! The stability and lubricating value of Tycol Alweave Spindle Oils assure minimum wear and low power consumption, all helping to step up production by reducing drag and thread breakage.

A wide range of Tycol Alweave Textile Oils is specially designed in both mineral and compounded grades to cut costs in other processes in your mill.

For further information about Tycol Alweave Textile Oils, write, wire or phone your nearest Tide Water Associated office today.

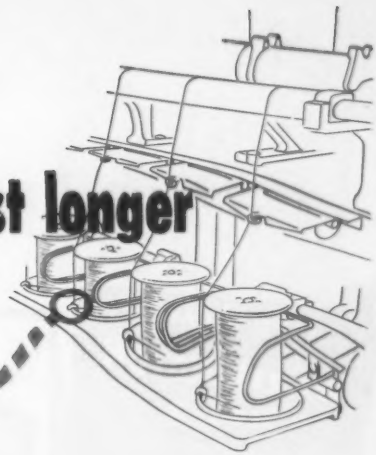
TYCOL
INDUSTRIAL LUBRICANTS

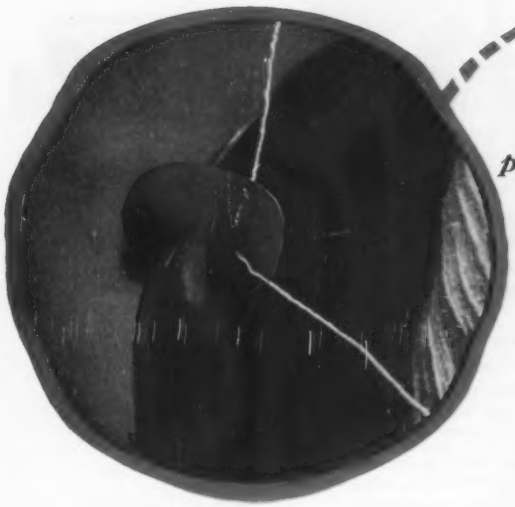
Boston • Charlotte, N. C. • Pittsburgh
Philadelphia • Chicago • Detroit
Tulsa • Cleveland • San Francisco

TIDE WATER ASSOCIATED OIL COMPANY
17 BATTERY PLACE | NEW YORK 4, N. Y.

SEND FOR A FREE COPY OF "TIDE WATER ASSOCIATED LUBRICANIA"

Nylon plastic travelers last longer





Nylon travelers made by the Clark Thread Co., Inc., Newark, New Jersey

need far less lubrication, provide more yardage on bobbins, cut costs.

Actual tests in many mills show that you can get better performance and reduce operating costs with nylon plastic travelers. Molded of Du Pont nylon, with its low coefficient of friction, these travelers need far less lubrication than those made of other materials. And nylon's toughness means long life... less machine down-time for changing travelers.

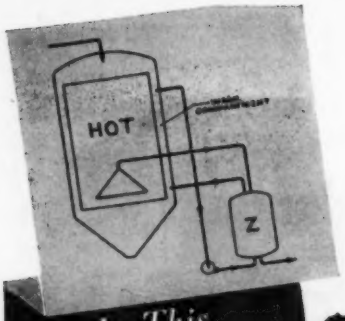
You get more yardage on present bobbins, too, because nylon travelers, with their lighter weight and low-friction surface, provide smoother operation. In many installations, they permit higher spindle speeds, minimize ballooning, and cause less end-breakage even though higher tensions may be applied. Today, many thousands of nylon travelers are in use . . . giving superior performance, saving production time, and cutting costs.

This is but one example of the many textile machinery parts molded of Du Pont nylon now improving performance and saving money for manufacturers. Such nylon parts as bearings, flyer blocks, bolsters, cap bars, and thread guides are becoming standard equipment in more and more mills.

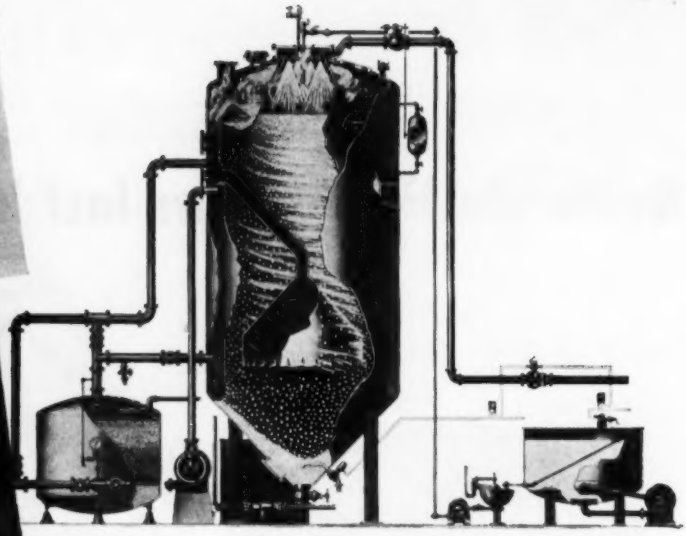
Demand for nylon currently exceeds supply. However, we suggest you investigate its versatile properties for future application. We will gladly discuss the availability of quantities for development work. For additional information on nylon and other Du Pont plastics, write:

E. I. du Pont de Nemours & Company (Inc.)
Polychemicals Department, District Offices:
350 Fifth Avenue, New York 1, New York
7 S. Dearborn St., Chicago 3, Illinois
845 E. 60th St., Los Angeles 1, California

DU PONT
REG. U.S. PAT. OFF.
PLASTICS
Better Things for Better Living
. . . through Chemistry



In This
WORTHINGTON
HOT-Z
Deaerating Type Water Conditioning System . . .



Built-In Annular Wash Water Compartment Supplies and Reclaims Backwash Water

Independent of the Softening Process

No other Hot Zeolite System offers you so many advantages as this Worthington Hot-Z System. A quick review of the vital facts will show you why.

As you probably know, Hot Zeolite beds require periodic expansion to minimize packing and friction loss, and to insure efficient contact of each Zeolite particle with its share of dissolved impurities. This need for bed expansion occurs not only during the regeneration routine, but also several times during the period between regeneration routines. That's why it is important for you to use clean, softened water, preferably at normal operating temperature, for the reverse flow or "backwash" operation.

Worthington does it!

The Worthington Standard Hot-Z System with its backwash feature provides a built-in annular wash water compartment that supplies and reclaims backwash water . . independent of the system's softening process. In this compartment, backwash water is cleaned and maintained at normal operating temperature.

This backwash feature pays off particularly in systems employing filters because it *makes filter beds last as long as eight years.*

Other advantages

Worthington Hot Process Systems come equipped with modern, direct contact vent condensers. This means, no more of the scaling trouble that made the old-fashioned shell and tube types such a nuisance.

In addition, Worthington Hot-Z Systems operate on low-priced lime and salt. That's why the average installation saves enough in chemical costs to pay for itself in 3 years.

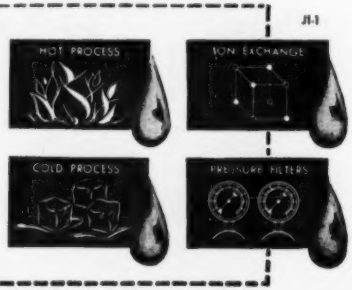
Get all the facts!

It will pay you to investigate the Worthington Hot-Z System thoroughly. Tell us your conditions of service and get our recommendation in terms of dollars and benefits. You'll find in our Hot-Z System, as in so much other equipment, *there's more worth in Worthington. Worthington Pump and Machinery Corporation, Water Treating Section, Dunellen, N. J.*

WORTHINGTON

WATER CONDITIONING

Worthington Makes More of the Equipment for All Types of Water Conditioning Systems



COLOR
SELLS
TEXTILES
Quality Keeps Them Sold
New colors . . . new combinations . . . mean new appeals — new sales. Exciting as they are, these color cycles must revolve around one fixed point — Quality — to be assured of success. This assurance is yours with Franklin Process Colors.
Franklin Process
LARGEST PACKAGE DYERS IN THE WORLD
PROVIDENCE • PHILADELPHIA
GREENVILLE • CHATTANOOGA
NEW YORK REPRESENTATIVE: 40 WORTH STREET

The Fleet Line's

NEW LAXLOOP CONTINUOUS WASHER

PAT. APPLIED FOR

with FREE-LOOP Electri-matic Compensators

Complete range of 9 bowls, seen from the drive side and on the entering end.

An Improved, Flexible, Vari-Speed Machine for Light and Heavy Weight Fabrics of Wool, Worsted or Blends

Made in various sizes according to production requirements, this newly developed multi-dolly continuous washer offers many advantages in ease of operation, economy of water, simplified automatic synchronization, accessibility and reduced labor. Among the many improvements over existing washers are:

1 Stainless steel construction throughout.

2 AC-DC drive with rheostat speed control — no side shaft to prevent easy accessibility. Variable speed according to number of bowls and operating conditions.

3 Positive counter current flow, with constant uniform pre-determined liquor level in each tub. Made possible by R & L stainless steel Flooded Suction Low Head Pump.

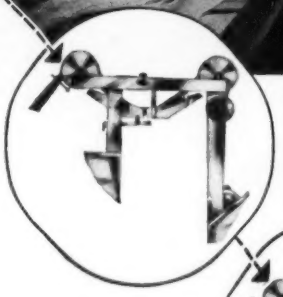
4 New shape of tub for smoother operation and fewer stops for rethreading.

5 Each unit kept in step by the new Riggs & Lombard FREE-LOOP Electri-matic Compensators. Cloth is tensionless throughout the range. Threading is faster and easier.

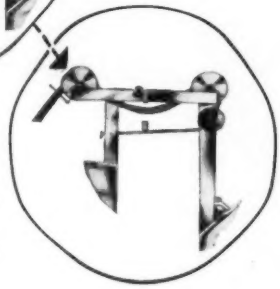
6 Folding or plaiting cleat rolls provided for smoother operation and uniform treatment.

7 Provision can be made for flow of liquor to stop automatically when machine stops, effecting increased hot water savings.

8 Cloth fully protected against damage of electric stop motions.



FREE-LOOP Electri-matic Compensator, Contact Type — When loop of cloth completes electrical circuit by making contact between two metal plates, main drive on the next tub speeds up as required.



FREE-LOOP Electri-matic Compensator, Trip Type — Loop of cloth runs in a synchronizing position between two electric eye units. When loop intercepts the proper beam, drive on the next tub changes speed as required. Trip bars can be used instead of photo-electric cells.

The Fleet Line

A complete line of modern equipment for the successful handling of present-day carbonizing, wet-finishing and dyeing requirements.

We will be glad to make recommendations on your particular washing problems.

RIGGS AND LOMBARD, INC.

FOOT OF SUFFOLK STREET, LOWELL, MASS.

DOMESTIC AGENTS: — Paul A. Merriam, 1491 Broad St., Prov., R. I. • Charles H. Dunker, 1236 So. Maple Ave., Los Angeles 15, Calif. • Albert R. Braen, 80 E. Jackson Blvd., Chicago 4, Ill. • Francis H. M. New, P. O. Box 1083, Greenville, S. C. **CANADIAN AGENT:** — H. E. Mott Co., Ltd., Brantford, Ont.

Strong . . . Resilient . . . Uniform . . .

Garland Rawhide Pickers

Molded for uniformity . . . with rounded spindle holes, reinforced stick holes and strengthened picker heads, *new* Garland Rawhide Pickers are getting an enthusiastic response in mills all over the country. Made exclusively of top grade, imported water buffalo hide for the resilience that means long wear.

A Note About the Supply Situation

A number of our customers have inquired about future deliveries and possible short supply. Like any other manufacturer today, we don't know what tomorrow will bring. However, our present stocks are adequate to meet current demands, and we will make every effort to continue to fill all orders to the best of our ability.

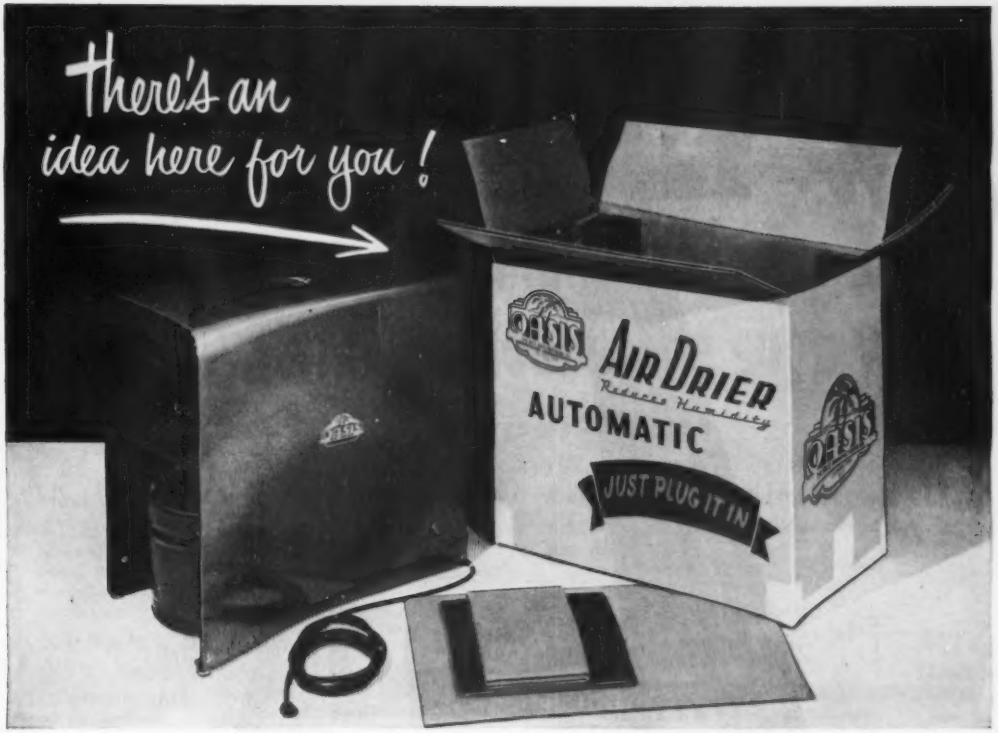
Just Out! New Catalog . . .

A comprehensive new Garland Rawhide Picker catalog has recently been mailed to key men in the textile industry. If you have not received a copy and feel that it would be helpful in your work, write to us stating your name, position, and company. Your request will receive prompt attention.

Garland
MANUFACTURING CO.
SACO, MAINE

 For more information, write direct or use Reader Service post card.

For more information, write direct or use Reader Service post card.



this air conditioner is "travel conditioned"

Even the finest appliance is useless, unless it is *delivered* to the customer in good condition. And to make sure this efficient Oasis Air Drier does arrive in perfect condition, the Ebco Manufacturing Company, Columbus, Ohio, ships it in this H & D engineered shipping box. Specially designed interior packing, with wax-coated surfaces to protect the product's finish, gives complete protection against jolts and bumps in transit.

The H & D Package Laboratory is ready to help with any shipping problem, to provide extra protection, or to give better display . . . increased sales . . . lower shipping and packing costs. For booklet, "Package Engineering," write Hinde & Dauch, 5107 Decatur St., Sandusky, Ohio.

H&D®

HINDE & DAUCH
Authority on Packaging

FACTORIES IN: Baltimore • Buffalo • Chicago • Cleveland Detroit • Gloucester, N. J. • Hoboken, N. J. Kansas City, Kan. • Richmond, Va. • Sandusky, Ohio St. Louis • Watertown, Mass. • *Offices in principal cities.*

Sure Stainless Pipe

is Tough to Get...

but using light weight *Schedule 5 Pipe* will almost double the supply

—and you pay less per foot!

What Schedule 5 Pipe Is—

A light wall pipe, Carpenter *Schedule 5* gives you more feet of pipe for every pound of scarce stainless steel. So you can quickly see how *Schedule 5* increases the amount of pipe available and reduces your cost per foot. Plus the fact that the larger I.D. means increased flow area. These cutaway sections of pipe show the actual difference in wall thickness.

Schedule 5 Schedule 40
2" I.P.S. (4x)

How Schedule 5 Reduces Costs

First saving is 40% to 50% on the cost of your pipe. And, because *Schedule 5* lets you use the next smaller pipe size, you reduce by as much as 25% your costs of valves, fittings, etc. Carpenter *Schedule 5* Pipe often permits the use of the next smaller pipe size, because of its larger inside diameter.

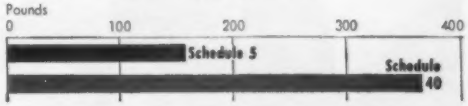
How It Hooks Up With Tube

This pipe is easily adapted to use with existing lines of tubing or Schedule 40 and 10 pipe, using simple connectors available from several manufacturers.

Why It Means More Pipe

You get *more feet of pipe* for every pound of material with Carpenter *Schedule 5* Stainless Pipe. And we don't have to tell you how important it is to get *more steel* from every pound of nickel and chrome these days.

2" I.P.S. STAINLESS PIPE weight per 100 feet



How It Resists Corrosion

You get the full corrosion resistance of the stainless analysis with Carpenter *Schedule 5* Pipe. It is made in standard A.I.S.I. analyses of stainless steel.

What Pressures It Handles

All sizes of Carpenter *Schedule 5* Pipe will handle 150 psi working pressures with a good margin of safety. Sizes up to 1½" will safely handle considerably higher working pressures. Where high pressures are involved, however, Schedule 40 may be required.

Data Sheets Give You More information about this opportunity to get more stainless pipe for essential uses. Write for a copy now. Under today's conditions, Carpenter *Schedule 5* Stainless Pipe may help solve several big problems, including "When can I get the pipe I need?"

THE CARPENTER STEEL COMPANY
Alloy Tube Division, Union, N. J.
Export Department: Carpenter Steel Co., Reading, Pa., "CARSTEELCO"

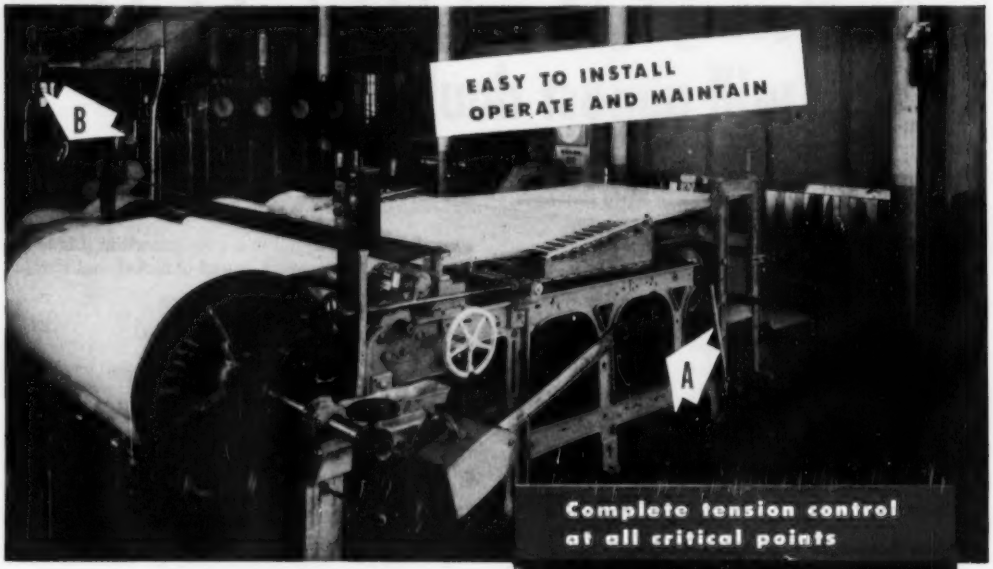
Carpenter

STAINLESS TUBING & PIPE

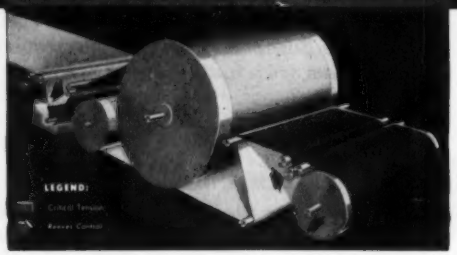
- guaranteed on every shipment

Build Better Beams with...

REEVES "Servo-Control" Slasher Drive



Arrow "A": The Complete Slasher Drive "nests" neatly beneath slasher head-end frame. *Arrow "B":* Handwheel—for setting Beam drive to maintain desired yard tension.



Add up all these quality-improving, money-saving advantages of REEVES "Servo-Control" Slasher Drive:

1 Finger-tip control from creep to run speeds by push button.

2 Smooth acceleration and deceleration through 15:1 speed range.

3 Quick, accurate, positive control of running speeds—without fluctuation—either manually or automatically tied in with moisture control.

4 Automatic, uniform tension regulation as beam builds.

5 Low initial cost; easily maintained by your mill mechanics; no complicated electrical hook-ups.

6 "Nests" under slasher head-end frame.

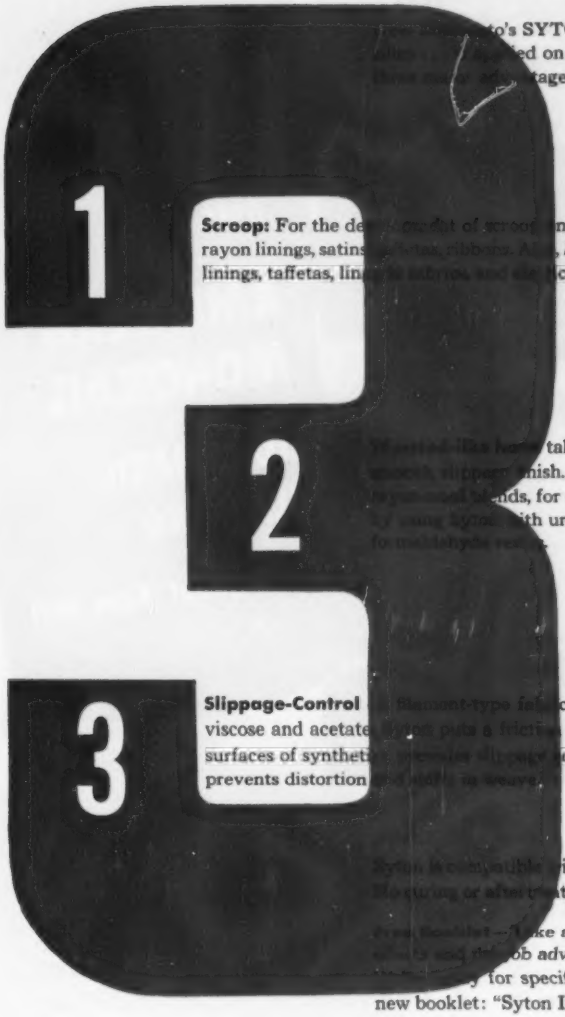
It will pay you to get the complete story right away. Send for bulletin No. W63a-S.

accurate · variable
REEVES *Speed Control*

REEVES PULLEY COMPANY • COLUMBUS, INDIANA

Recognized leader in the specialized field of speed control engineering

Three new improvements for finishing synthetics



…o's SYTON . . . a uniform, microscopic …ed on the padder or jig for …tages:

Scroop: For the de… …n nylon marquisettes, rayon linings, satins … *luster control* on sheers, linings, taffetas, lin… …c webbings.

… takes the place of the regular synthetic's …nish. On viscose-acetate suitings and …nds, for example, a fine dry hand is obtained …ith urea or melamine …

Slippage-Control … …cs including nylon, viscose and acetate … "tread" on slippery surfaces of synthet… …ontrol, prevents distortion …

… …ith a wide variety of finishing agents. …tment is necessary.

… …ke advantage *now* of the special finishing …ob advantages* that Syton can give you. … for specific information, or for Monsanto's new booklet: "Syton In Textile Finishes." Syton: Reg. U. S. Pat. Off.

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CHEMICALS — PLASTICS

SERVING INDUSTRY . . .
WHICH SERVES MANKIND

MONSANTO CHEMICAL COMPANY, Textile Chemicals Dept.
Everett Station, Boston 49, Mass.

☐ Please send me information on Syton for
☐ Please send me the special booklet: "Syton In Textile Finishes."

Name & Title

Company

Address

City, Zone, State

48 spinning frames are cleaned by 4 ceiling and over-frame units. Each frame is equipped with an under-frame cleaner.

ONE OVERHEAD CLEANER serves the four Roto-Corners. All cleaning units are expected to pay their cost in two or three years.

Gastonia Combed Yarn Corp.

USES

AMERICAN MONORAIL

AUTOMATIC CLEANING

Throughout Yarn Mill

"The sole reason for putting in automatic cleaning was to increase quality, but we're getting a lot of other benefits," said Mr. J. J. Hinds, general superintendent of Gastonia Combed Yarn Corp., Gastonia, N. C.

Quality has been increased in cleaner yarn with a better appearance. Production is increased in the card room and the spinning room because machines do not have to be stopped for hand cleaning of the ceilings. American MonoRail Automatic Cleaners have virtually eliminated this time-consuming job.

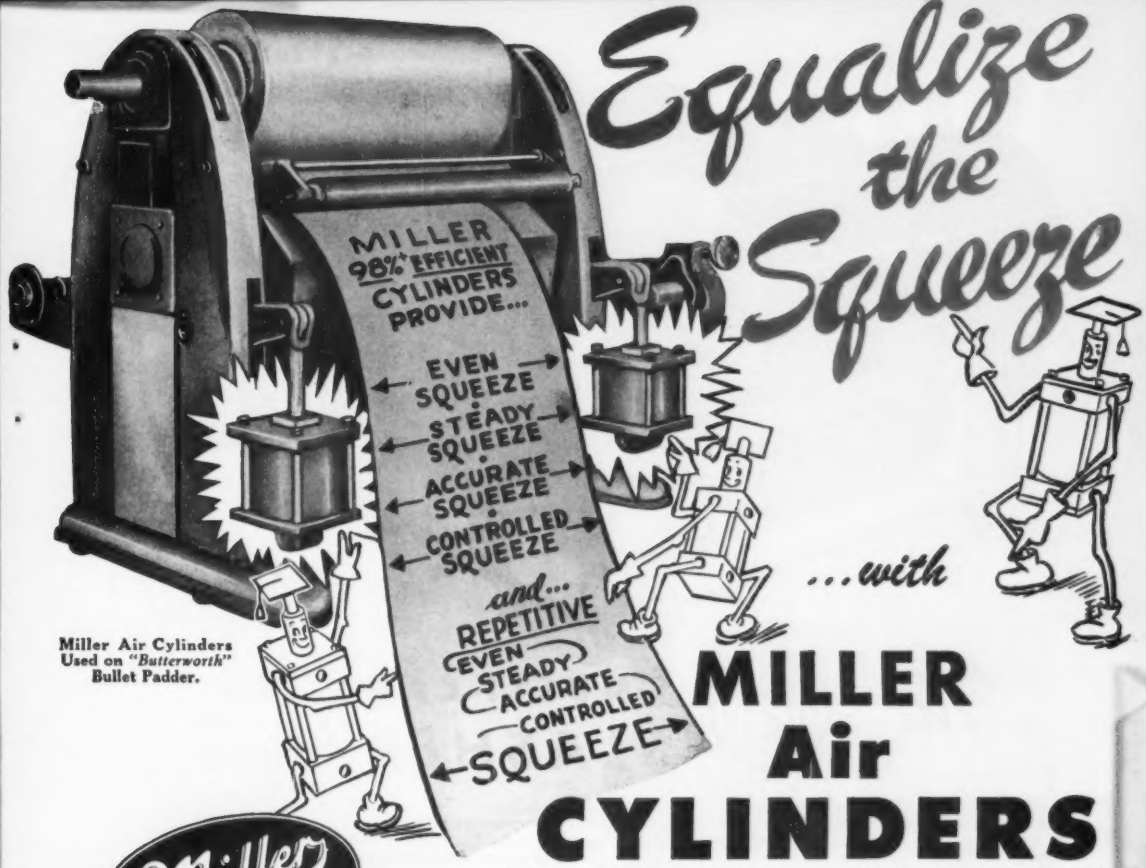
Added to these are other advantages, such as smoother running work, cleaner rooms that improve employee morale, reduction of accidents, dead air pockets broken up, fire hazards reduced.

An American MonoRail engineer will gladly explain all the advantages of American MonoRail Automatic Cleaning at your convenience. Write today for an appointment.

THE AMERICAN MONORAIL COMPANY

13108 ATHENS AVENUE **CLEVELAND 7, OHIO**

Equalize the Squeeze



Miller Air Cylinders Used on *"Butterworth"* Bullet Padder.

...with

MILLER Air CYLINDERS

Miller Air Cylinders economically provide the steady, even, repetitive "squeeze" so essential for the pressure rolls of textile machinery and equipment.

Precision-accurate adjustment and repetitive application of pressure to always the exact degree desired are assured by the high-efficiency, leakproof operation of these cylinders and the extremely low "break-away"s pressures required to obtain smooth piston movement. Even when the operating plant air pressure is again applied after days of machine inactivity, piston movement is instantaneous—smooth- -chatter-free . . . because the Miller *self-regulating, wear-compensating* piston and rod seals *will not "freeze"* to prevent piston movement or to cause jumpy, jerky action. These seals never need adjustment, have no provision for adjustment, therefore *cannot be over-adjusted.* The Miller rod seal operates against the Miller scratch-resistant, rustproof hard chrome plated piston rod; the Miller piston seal operates against the precision-honed, highly polished finish of the Miller rustproof hard brass cylinder barrel. No wonder these seals still give leakproof, efficient service after millions of strokes. No wonder Miller Air Cylinders are completely free from the rust conditions common to ordinary cylinders.

In addition, *dirt wipers* at rod ends keep out all dirt and lint, and *solid steel* heads, caps, and mountings eliminate costly, dangerous breakage.

Miller

TRADE MARK REGISTERED

AIR CYLINDERS for

- Bullet Padders
- Washers
- Steamers
- Rope Squeezers
- Bleaching Equipment
- Dyeing Equipment
- Other Textile Machinery

Write for illustrated cylinder bulletins A-105 and H-104

COMPLETE MILLER CYLINDER LINE INCLUDES: AIR CYLINDERS, 1½" to 20" BORES, 200 PSI OPERATION; LOW PRESSURE HYDRAULIC CYLINDERS, 1½" TO 6" BORES FOR 500 PSI OPERATION, 8" TO 14" BORES FOR 250 PSI; HIGH PRESSURE HYDRAULIC CYLINDERS, 1½" TO 12" BORES, 2000-3000 PSI OPERATION. ALL MOUNTING STYLES AVAILABLE.

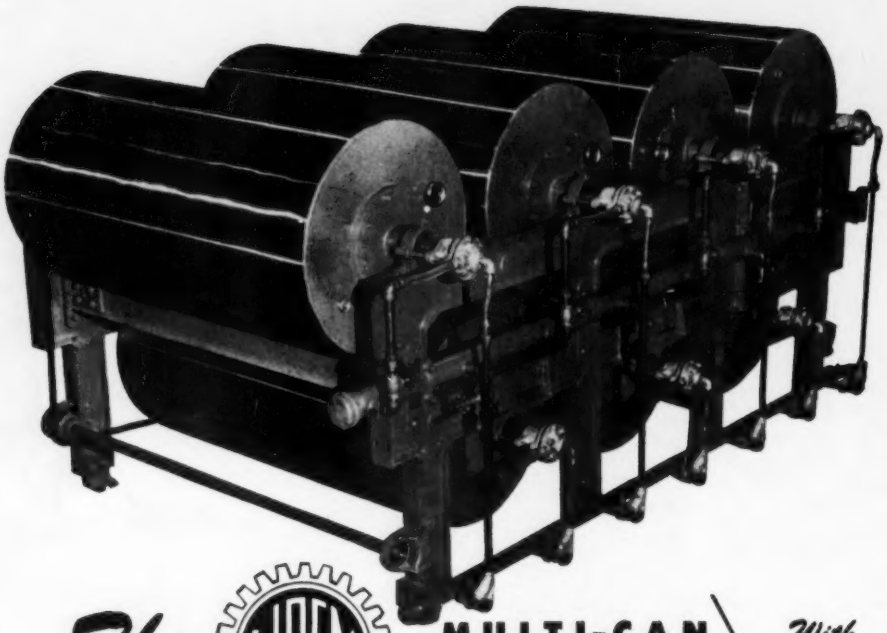
Miller

MILLER MOTOR COMPANY

2040 N. HAWTHORNE — MELROSE PARK, ILL.

CLEVELAND — PITTSBURGH — PHILADELPHIA — DETROIT — YOUNGSTOWN — BOSTON — HARTFORD — NEW YORK CITY — DAYTON — ST. PAUL — FORT WAYNE — INDIANAPOLIS — MILWAUKEE — NASHVILLE — SEATTLE — LOS ANGELES — SAN FRANCISCO — BALTIMORE — ST. LOUIS and OTHER AREAS.

Sales and Service from coast to coast



The MULTI-CAN SLASHER

With 5, 7, 9, or 11 30" CYLINDERS

The WPF&M Multi-Can Slasher is designed to produce quality warps from fibers suited to this type slasher, at high speed and low operating costs.

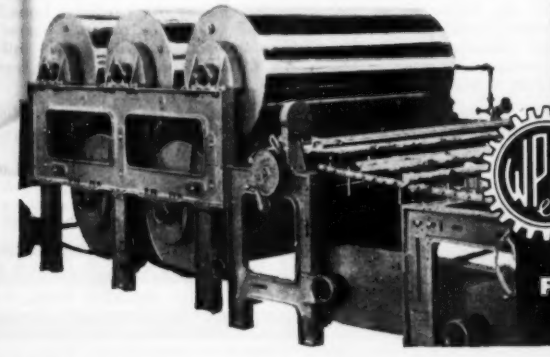
Furnished with either 5, 7, 9 or 11 thirty-inch diameter cylinders, the WPF&M Multi-Can Slasher can be adapted and equipped to fill any mill requirement.

If existing head ends and size boxes are in good condition, they can easily be adapted for use with the Multi-Can cylinder section. Or, the WPF&M Multi-Can Slasher can be furnished complete with any of several types of modern WPF&M head ends, drives and size boxes.

The polished, stainless steel cylinders, with welded-in steel heads, can be operated at pressures up to 35 psig. Rotary packless steam joints and sealed, self-aligning anti-friction bearings provide smooth, trouble-free operation. Each cylinder is equipped with vacuum valve, thermometer, condensate trap and flexible pipe connections. Temperature control can be provided for manifold, group or individual cylinder control.

Roller chain sprocket drive with tension idlers is smooth, quiet running. Either mechanical or electrical type tension control between cylinders and size box, and head end and cylinders are available. Heavy rigid cast iron frames, accurately machined to maintain alignment, support the cylinders.

The WPF&M Multi-Can Slasher is one of the complete line of modern Slashers manufactured by the West Point Foundry & Machine Company—specialist in Slasher Room machinery and equipment.



WPF&M WARP PREPARATION MACHINERY

STANDARD 2 and 3 CYLINDER SLASHERS
MULTI-CAN SLASHERS
WPF&M HI-SPEED 4 CYLINDER SLASHERS
CALLAWAY SAMPLE SLASHER

SLASHER MODERNIZATION EQUIPMENT

HI-SPEED HEAD ENDS WITH STRETCH CONTROL
STANDARD WPF&M HEAD ENDS
MULTI-MOTOR DRIVES and CONTROLS
TEMPERATURE, SPEED and TENSION CONTROL DEVICES
HI-SPEED SIZE BOXES
MODEL 50 SIZE BOXES
STANDARD SIZE BOXES
SIZE KETTLES and EQUIPMENT

WEST POINT FOUNDRY & MACHINE CO.
WEST POINT, GEORGIA

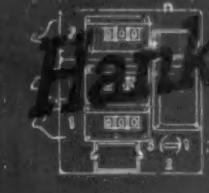
For more information, write direct or use Reader Service post card.

Only

VEEDER-ROOT

makes 2 1 3 Convertible

Pick-

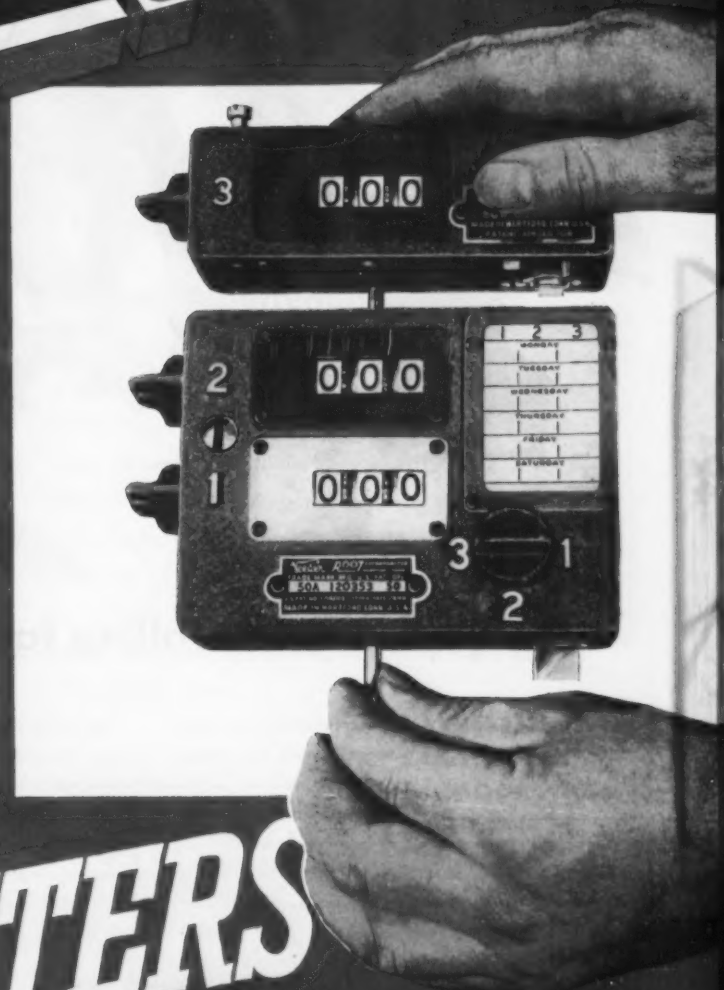


Hank-

Yardage-

Knitting-

COUNTERS



VEEDER-ROOT INCORPORATED

Counting Heads of the Textile Industry

HARTFORD 1, CONN. • GREENVILLE, S. C.

In Canada: Veeder-Root of Canada, Ltd., 111 St. James Street, Montreal 2.

In Great Britain: Veeder-Root Ltd., Kingston Road, Dundee, Scotland

Competition is rolling faster every day

...and it begins in the WEAVEROOM!

Never before have the active interests of men and women ranged so far afield. And to live such crowded lives, never has the individual customer found so many needs for different cloths and clothes. In every corner of the market there is strenuous bidding, *from many sources*, for the biggest share of the customer's dollar. Yes, the track is really jammed!

This market condition puts a premium on well-run weave rooms, equipped with high-speed, convertible C&K Call Box Looms, maintained with Certified C&K Loom Parts. But it requires something even more: *The imaginative use, to fullest extent, of the amazing versatility built into every modern C&K Loom.* Are *you* getting *all* there is to get? Glad to go into this matter with you, any time you say.

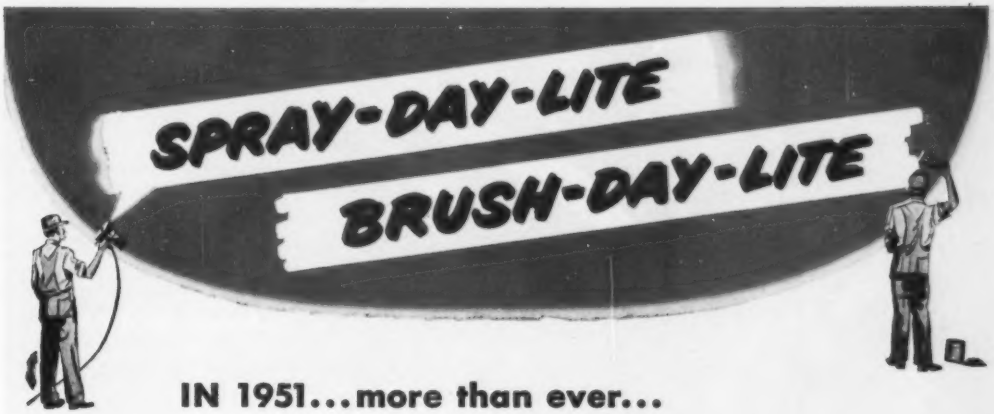
Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

PHILADELPHIA, PA. • CHARLOTTE, N.C. • ALLENTOWN, PA. • CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I.

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Woven Fabrics

For more information, write direct or use Reader Service post card.



IN 1951...more than ever...

it pays to use America's leading

one-coat

Interior Maintenance Paint!

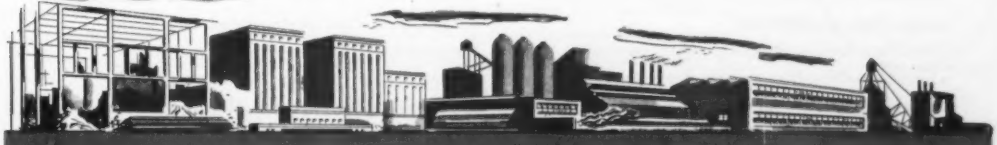
America's First and Finest

COLOR SERVICE

to make your painting pay extra dividends at no extra cost

A service comprising detailed color suggestions tailor-made for you by trained consultants from Glidden Color Laboratories with over 21 years of experience. These comprehensive color harmony plans for interior painting based on Glidden's famous Sight Perfection Program pay important extra dividends! For complete information about this free service, write Dept. C-751.

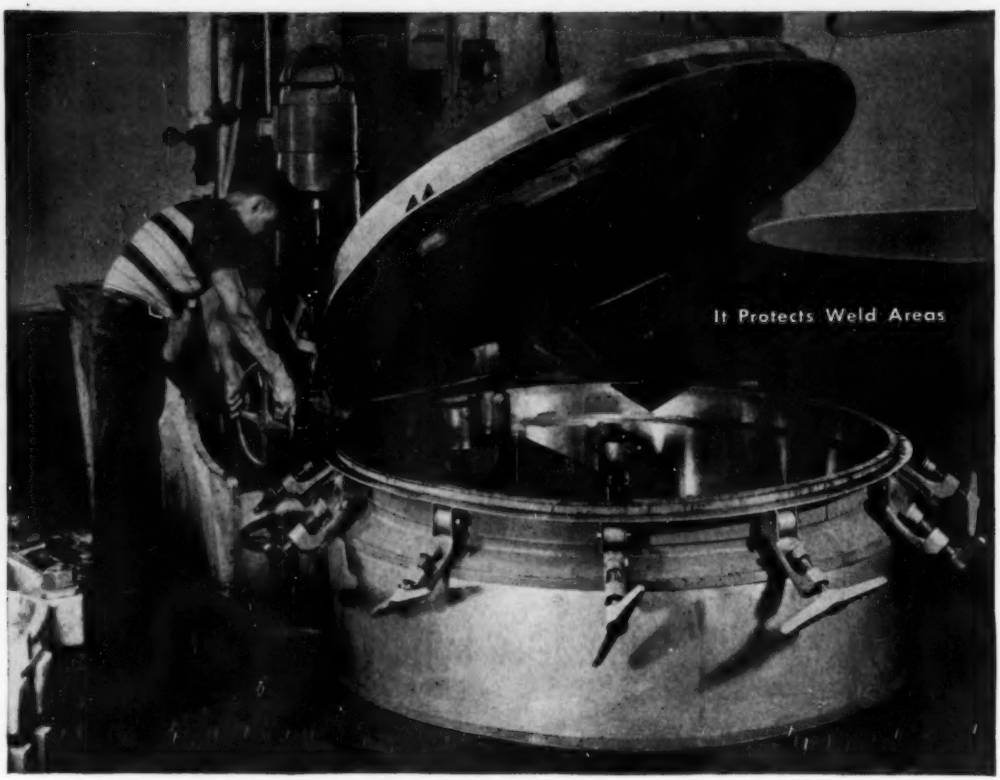
The rearmament program demands heavy duty wall paints that cover in just one coat and give more years of service. Glidden SPRAY-DAY-LITE and BRUSH-DAY-LITE do both . . . saving you critical time, labor, material and money. Their high light reflection improves vision and eliminates eyestrain . . . reducing spoilage, promoting safety, building better employee relations. In non-fading white and 10 attractive colors.



Glidden MAINTENANCE PAINTS

QUALITY Glidden PRODUCTS

Pacemakers in Paints



Specify "ELC" for Essential Equipment

When you buy essential new equipment or make necessary repairs involving welding, you'll want to consider the many advantages of Armco "ELC" Stainless Steels.

These special stainless steels are just as corrosion resistant adjacent to the welds as elsewhere. The reason is the Extra Low Carbon content (.03% maximum) of Armco Types 304 ELC and 316 ELC.

IDEAL FOR SYNTHETICS

Extra Low Carbon eliminates costly corrosion alongside weld areas when it is due to the heat effects of welding. This is especially important if your equipment is used in producing certain synthetics.

Another important advantage is that Armco ELC grades *cost less* than corresponding types stabilized by the addition of columbium or titanium.

WIDE RANGE OF USES

Armco ELC grades can cut operating costs and prolong service life in agers, bleaching and fulling machines; in carbonizing equipment and dye kettles; and in all kinds of equipment for the production of synthetics. It is not recommended when service temperatures are above 800 F.

Find out how *you* can take advantage of the special properties of Armco ELC. Just write us, or ask your equipment fabricator to inquire.

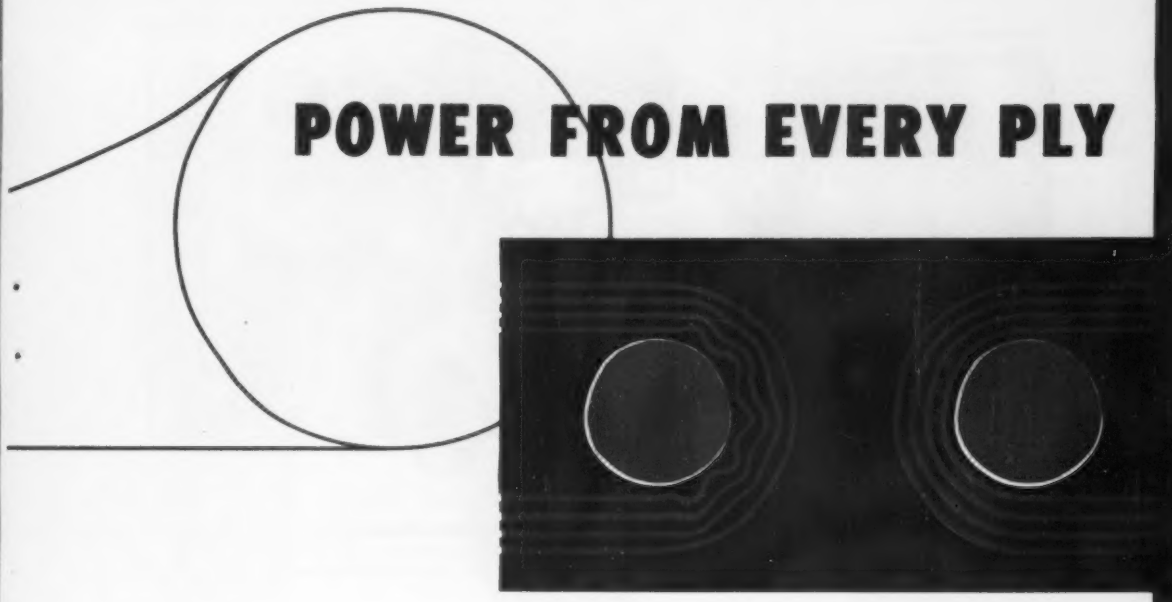
ARMCO STEEL CORPORATION

3861 CURTIS STREET, MIDDLETOWN, OHIO • PLANTS AND SALES OFFICES FROM COAST TO COAST • EXPORT: THE ARMCO INTERNATIONAL CORPORATION

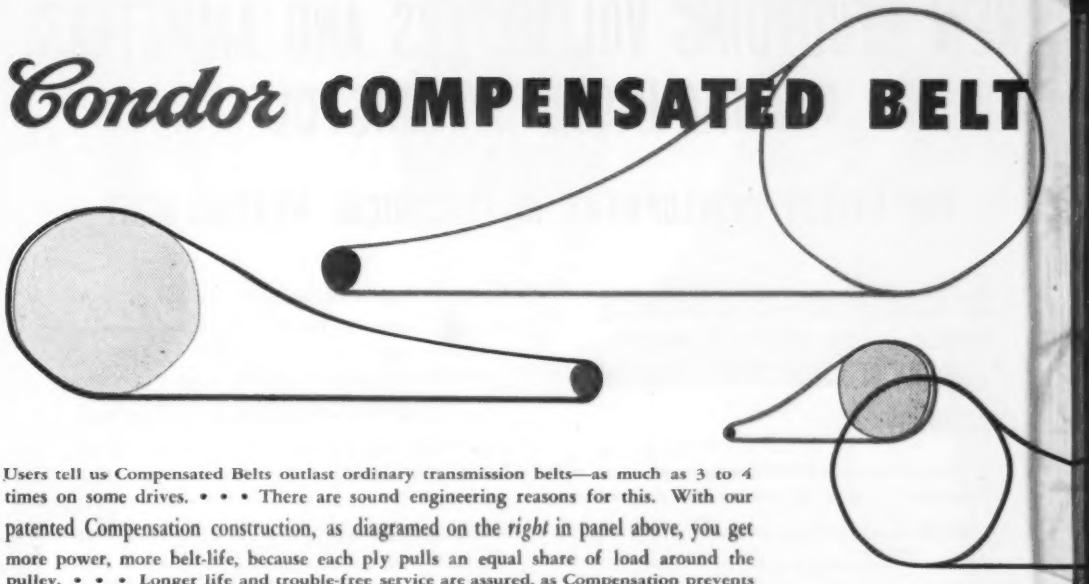
ARMCO

For more information, write direct or use Reader Service post card.

POWER FROM EVERY PLY



Condor COMPENSATED BELT

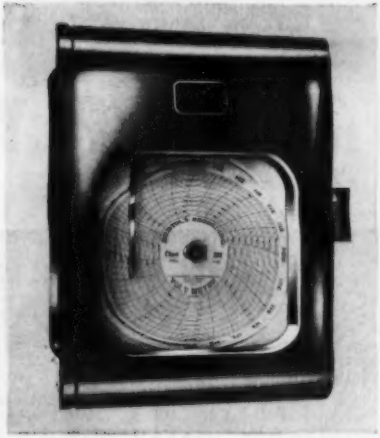


Users tell us Compensated Belts outlast ordinary transmission belts—as much as 3 to 4 times on some drives. • • • There are sound engineering reasons for this. With our patented Compensation construction, as diagramed on the *right* in panel above, you get more power, more belt-life, because each ply pulls an equal share of load around the pulley. • • • Longer life and trouble-free service are assured, as Compensation prevents outer ply ruptures, fastener troubles, ply separation, which often occur in regular belts as diagramed at *left* above. Wire for Bulletin 6808-J, which explains these and other features. • • • Extra long life is also engineered into R/M hose, V-belts and conveyor belts. See your R/M distributor.

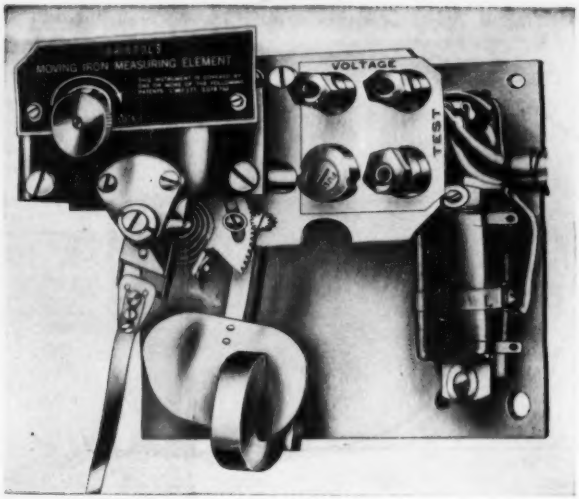
MANHATTAN RUBBER DIVISION — PASSAIC, NEW JERSEY

RAYBESTOS-MANHATTAN, INC.

Manufacturers of Mechanical Rubber Products • Rubber Covered Equipment • Radiator Hose • Fan Belts • Brake Linings • Brake Blocks • Clutch Facings • Packings • Asbestos Textiles • Powdered Metal Products • Abrasive and Diamond Wheels • Bowling Balls



PERMANENT MOUNTING offered in three models: interchangeable surface and flush, surface-panel and flush panel. Note the pleasing, well-balanced appearance. Also; **PORTABLE INSTRUMENTS** are offered in two models: for setting on floor or table; for mounting on walls or poles and general service.



NEW MOVING-IRON MEASURING MECHANISM. High torque, low burden, rugged construction for assurance that the original calibration will be retained through years of service. Shock-absorbing stainless steel bearings.

NEW RECORDING VOLTMETERS AND AMMETERS

ANNOUNCED BY BRISTOL

THE LATEST DEVELOPMENT IN ELECTRICAL MEASUREMENT

Outstanding for—High actuating torque... Low electrical burden... Stability of calibration... Dependable accuracy

Here is electrical measurement at its finest . . . most dependable . . . most convenient to use—the product of nearly 60 years of experience in building recording voltmeters and ammeters for almost every application.

The new moving-iron measuring mechanism is a type known for high actuating torque and low electrical burden . . . refined by Bristol engineers for greater accuracy and ruggedness.

Other Bristol developments that assure convenience in use include the new Series 500 dust- and moisture-protected die-cast aluminum case, quick-set chart hub for easy chart changing, non-obscuring pen lifter, snap-on chart plate.

To keep up with the latest in recording instruments, send for Bulletin E1111, addressing THE BRISTOL COMPANY, 103 Bristol Road, Waterbury 20, Conn.

BRISTOL

AUTOMATIC CONTROLLING, RECORDING AND TELEMETERING INSTRUMENTS

masterpieces of knitting with TORRINGTON needles
The proof of the needle is in the knitting. Torrington Needles are world famous for the quality of the work they do. There's a Torrington Needle to meet every knitting need.
THE TORRINGTON COMPANY
Torrington, Conn., U. S. A. Established 1866
Branches: New York • Philadelphia • Chicago • Boston
Greensboro, N. C. • St. Louis • Toronto, Canada.
Pacific Coast Representative: E. G. Paules, 1762 West
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Broadgate House, 7-10 Eldon St., London E.C. 2, England.

is light weight important to your product?

Torrington Needle Bearings contribute to weight-and-space-saving design in many products.

For any given load, Needle Bearings weigh less and require less radial space than any other type of anti-friction unit.

Needle Bearings also permit weight savings in related components. Only a bore machined to proper dimensions is required for the housing and no spacers or retainers are needed.

So, if your product can benefit from light weight, let our engineers help you utilize the weight- and space-saving advantages of Torrington Needle Bearings.

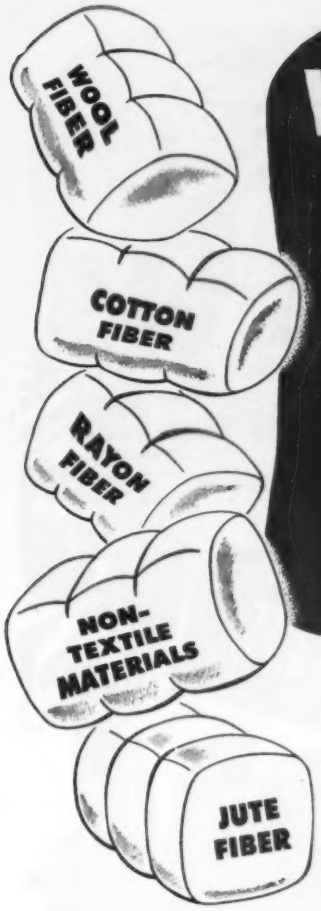
THE TORRINGTON COMPANY

Torrington, Conn. • South Bend 21, Ind.

District Offices and Distributors in Principal Cities of United States and Canada

TORRINGTON *NEEDLE* BEARINGS

NEEDLE • SPHERICAL ROLLER • TAPERED ROLLER • STRAIGHT ROLLER • BALL • NEEDLE ROLLERS

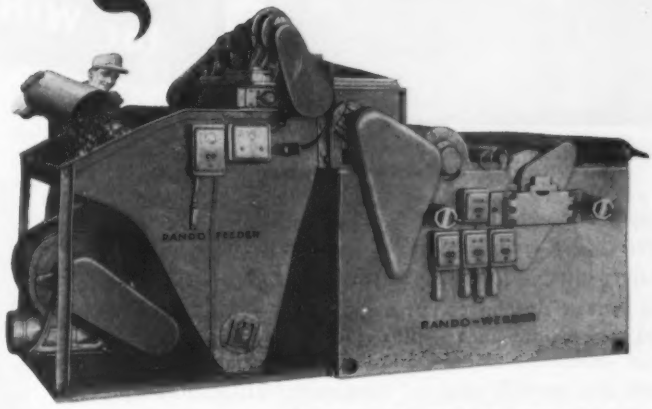


WASTE?...

Not Necessarily

YOU CAN TURN THESE FIBERS INTO PROFITABLE PRODUCTS WITH

RANDO-FEEDER* AND RANDO-WEBBER*



*T.M. CURLATOR CORP. ROCHESTER, N.Y.

Many new products... *not necessarily textile*... are being developed from random webs produced by the Rando-Feeder and Rando-Webber from waste fibers. Excellent results are *also* being obtained with non-textile waste materials when used in conjunction with textile fibers. Yes, it will pay research and product minded people to look into these new developments. Write today.

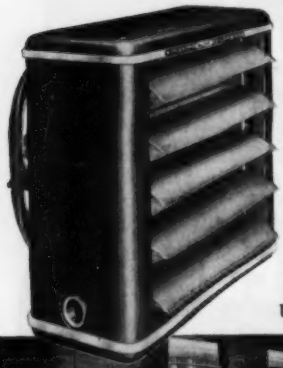
TEXTILE DIVISION
CURLATOR
CORPORATION
ROCHESTER 10, NEW YORK

Curlator Corporation, Textile Division
583 Blossom Road, Rochester 10, New York

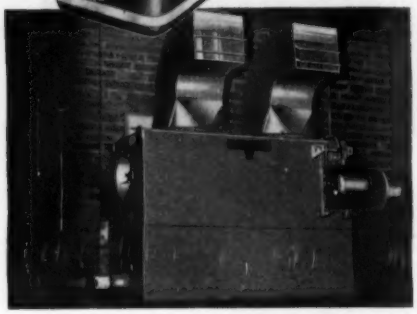
- ☐ Please schedule a demonstration
- ☐ Please make up samples from my own waste
- ☐ Please send Random Web Bulletin 101

NAME .....
COMPANY .....
ADDRESS .....
CITY .....

PLENTIFUL HEAT WHERE IT'S NEEDED with "Buffalo" UNIT HEATERS

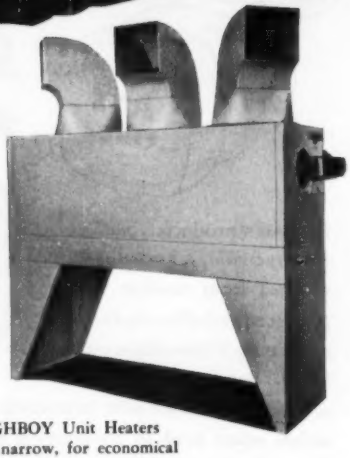


Breezo-Fin Unit Heater



Buffalo Lowboy Unit installed overhead takes no floor space. Throws heat down where needed.

Plan *now* for adequate heat this coming winter! "Buffalo" offers you a complete line of suspended and floor type heaters suitable for any area you have to heat. All have the proven Aerofin coils for maximum heat dissipation and easy maintenance — plus efficient "Buffalo" Fans for most effective and economical heat distribution. These units also provide positive ventilation. HIGHBOY and LOWBOY units are used for makeup air in connection with exhaust systems. WRITE FOR BULLETINS 3704-A and 3137-D for complete data.



HIGHBOY Unit Heaters are narrow, for economical installation next to walls.

"Buffalo" FIRST FOR FANS

BUFFALO FORGE COMPANY

184 MORTIMER ST. BUFFALO, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont. Branch offices in all Principal Cities

VENTILATING FORCED DRAFT | AIR WASHING COOLING | AIR TEMPERING HEATING | INDUCED DRAFT PRESSURE BLOWING | EXHAUSTING

One of three Cleveland special 70AT units driving a woolen card at one of the large textile mills in New Hampshire. The unit pictured drives the main card cylinder, stripper rolls and the fancy roll. There are powerful, right-angle Cleveland drives for every type of service.

Compact Cleveland drive is powerful, sure and safe

Adequate aisle space is essential in a woolen mill—so units that drive woolen cards must be compact, yet powerful enough to do the job. That's why the Davis and Furber Machine Company of North Andover, Massachusetts, has made Cleveland Worm Gear Speed Reducers standard equipment on its new Model L carding machine.

In addition to allowing needed space between cards, Cleveland drives mean safer working conditions. Large diameter pulleys and flat belting, once a serious safety hazard, are eliminated.

Cleveland is first choice for any job where a powerful, trouble-free, right-angle drive is desired. Engineers know from experience that they can depend on Cleveland, wherever they serve. They give satisfactory service, no matter how severe the conditions.

For specifications and other details, write for our current catalog. The Cleveland Worm & Gear Company, 3268 East 80th Street, Cleveland 4, Ohio.

Affiliate: The Farval Corporation, Centralized Systems of Lubrication. In Canada: Peacock Brothers Limited.

CLEVELAND
Worm Gear
Speed Reducers

Life-Linestarter
PAIRED FOR PRODUCTION
Life-Line motor
DO NOT LUBRICATE

LINT?

Improve weave room performance with this pair

Lint, dust, dampness will not affect the operation of these two. They're especially designed for weave room operation. Look at the extra features of the loom motor starter—designed in collaboration with leading textile manufacturers and the Associated Factory Mutual Fire Insurance Companies and the only starter approved by A. M. F. I.

Lint and dust are kept out! A special Neoprene gasket forms a positive, continuous seal between the box and cover. Pressure from cover clamp makes sure every crevice is filled with the pliable Neoprene gasket—positive assurance that combustible elements cannot enter the enclosure. Thus, one major cause of weave room fires is eliminated.

The loom motor, too, is totally-enclosed. No chance for lint to clog windings. Notice, too, there are no greasing nipples or cups on the motor. Life-Lines have pre-lubricated bearings . . . need no lubrication. Thus, outages from faulty lubrication are eliminated. There's no dripping grease to mar textiles.

Together, these two cut motor outages and down time—save on maintenance time. Why not get the advantages of this combination? Ask your Westinghouse representative for complete details on Westinghouse motors and controls. Get a copy of the new Loom Motor Starter Booklet, B-5256. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-21634

YOU CAN BE SURE.. IF IT'S
Westinghouse
Life-Line
MOTORS and CONTROLS

These 2 Advantages have been PROVED MILLIONS OF TIMES!

DYES YARN MORE QUICKLY AND UNIFORMLY

KEEPS YARN IN BETTER CONDITION FOR WINDING

This famous SMITH-DRUM Skein Dyeing Machine introduced the revolutionary principle of "moving the liquor instead of the yarn". As a result of this principle, it provides two great money-saving advantages:

1st—The yarn is dyed more quickly and uniformly.

2nd—The yarn is kept in better condition for winding because tangling or breaking of the filaments is prevented.

Both of these advantages result in greatly improved quality and big savings in time and money. Both have been proved by every batch they have handled. And that means they have been proved many millions of times. For these machines are in daily use in a majority of the leading dyehouses which dye filament rayon and nylon yarns and fine count cotton yarns in skein form. It will pay you to get the complete facts.

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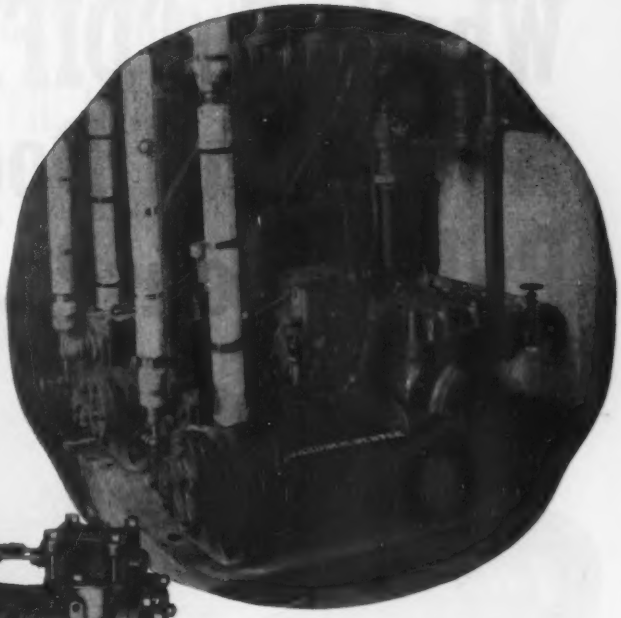
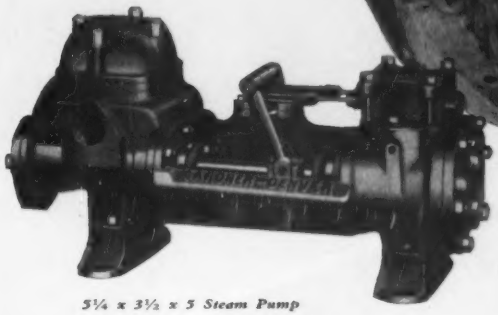
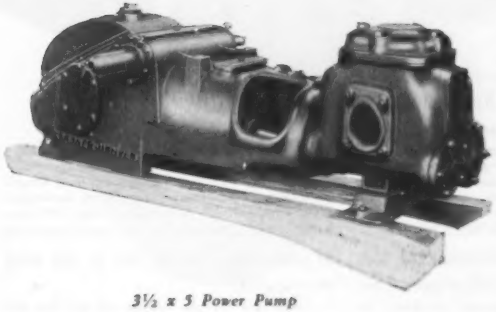
ALLEGHENY AVENUE AT 5TH STREET, PHILADELPHIA 33, PA.

2-Way Economy with GARDNER-DENVER Boiler Feed Pumps





5¼ x 3½ x 5 Steam Pump



3½ x 5 Power Pump

1. POWER ECONOMY! Gardner-Denver Steam Pumps have short and direct steam ports for greatest steam economy. The steam valves stay tight at all steam pressures.

Gardner-Denver Power Pumps are equipped with friction-defying Timken tapered roller main bearings. Herringbone gears and large eccentric bearings transmit more of the power into useful pumping.

2. IN THE SIZE YOU NEED! Gardner-Denver Boiler Feed Pumps are manufactured in a wide range of sizes, for any type of drive. Our pumping experts will gladly help you select just the right combination for maximum economy in your plant.

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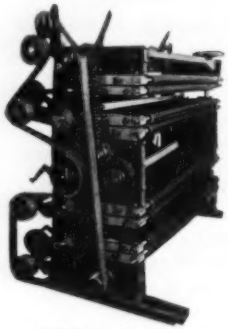
What's So "DIFFERENT" About Bull Dog Rub Aprons?



Illustrated above is a typical application of Bull Dog Rub Aprons in a leading manufacturer's Card Condenser.

Boss carders who have actually used Bull Dog Card Condenser Rub Aprons can probably give you the best answer to this question, in terms of dramatic results.

They will tell you, for instance, that because Bull Dog Rub Aprons are made of a specially formulated patented synthetic material, they are stronger than other types of rub aprons . . . and last much longer.

Bull Dogs permit increased card condenser production up to 25% or more. They increase jack-spool capacity 40-50% by weight, resulting in lower handling charges and longer runs. Roving is firmer and denser. End breakage is cut to a minimum.

These same users will tell you that they are getting longer machine life and lower maintenance costs . . . because Bull Dog Aprons can be run up to 30% slower where only ordinary rubbing is required.

And they will tell you about Bull Dog's patented end construction with enlarged rivet brads which securely anchor the buttons to the apron end . . . as many buttons as you want . . . spaced just as you want them spaced.

These are by no means all of the advantages obtainable with Bull Dog Rub Aprons. Which brings up the point that you deserve to know the full story and all the facts.

Contact your local distributor, or write direct . . . *today.*

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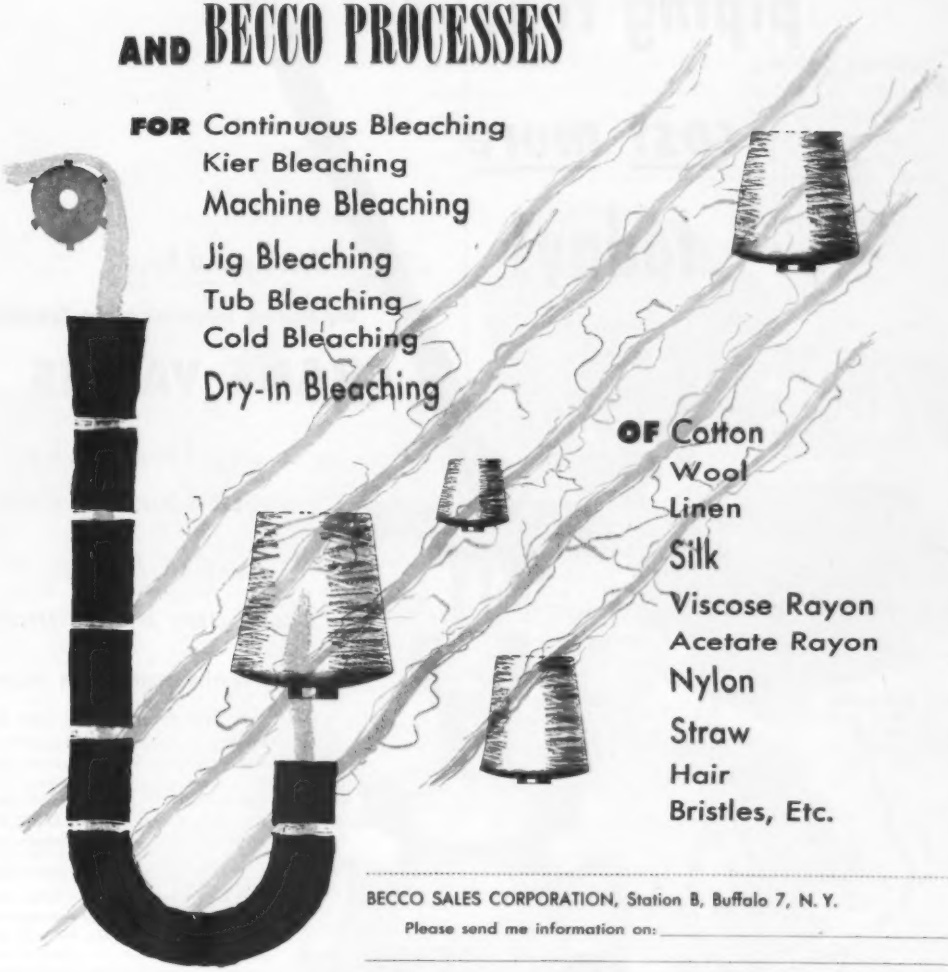

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Motors like these keep your production at the peak!

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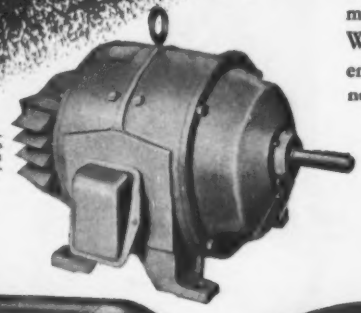
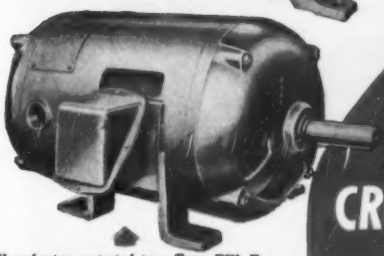


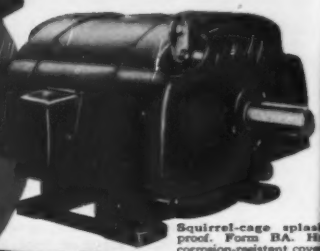
Form F dripproof and drip-proof-protected types Form F, in ratings to 7½ hp. Form H, 10 to 200 hp.

"Sealedpower" totally-enclosed fan-cooled squirrel-cage motors, 3 to 125 hp. Also explosion-proof underwriters'-approved, 20 to 125 hp. Cooled by air blown along the finned outer case.



Wound-rotor protected type Form BW. For slow, smooth acceleration, high starting torque with low starting current, or variable speed. Drip-proof, splash-proof, 1 to 200 hp.

ELLIOTT
CROCKER-WHEELER
Integral
motors

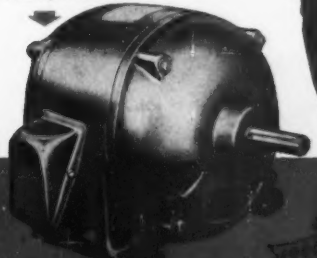


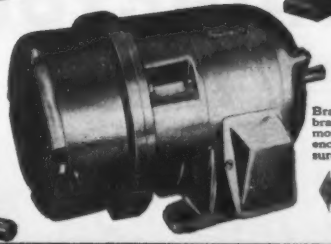
Squirrel-cage splash-proof. Form BA. Has corrosion-resistant covers which prevent entrance of splashing liquids.

Squirrel-cage, totally-enclosed, non-ventilated Form BE. Available up to and including 3 hp at 1800 rpm, for applications requiring protection against dust, fumes, moisture.

Mill motor, W600 Series, DC. Conforms in all respects to AIEE standards. Offers more power without increase in frame size.

Squirrel-cage protected type Form BA. An open dripproof motor for general purpose use. Available in wide modifications to meet a variety of conditions.





Brake motor using latest disk type brake mounted on BA dripproof motor. Also available with totally enclosed and splashproof enclosures for AC or DC applications.

Above is a partial showing of the complete line. For descriptive bulletins, address Elliott Company, Dept. T.W., Jeannette, Pa.

CW-37

ELLIOTT COMPANY
Crocker-Wheeler Division • Ampere, N.J.
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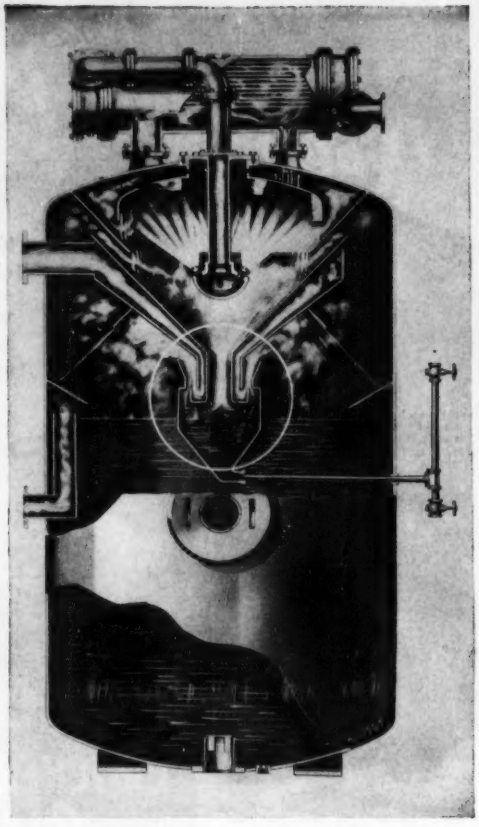


Hard scale, formed on the trays of deaerating evaporator preheaters, is no longer the big problem it used to be.

In a large central station (name on request), the preheaters had to be cleaned every three weeks, and the units were completely shut down at that time from eight to ten hours.

Then Worthington steam-jet deaerators were installed—with a "blowdown" head designed by Worthington engineers. This special head allows the operator to remove harmful deposits at regular intervals *while the unit continues in service*. It also provides for simple and speedy acid cleaning of critical parts, when necessary, without even opening an access door or removing any parts from the unit.

Compare The "Time-Outs"

The Worthington unit, given a short blowdown once each shift, stays in continuous operation with maximum deaeration for periods of at least 8 months. When the acid treatment is given at the end of that period, the job is finished in under three hours.

Compare this with the former record. *Then*—8 to 10 hours outage every three weeks and labor by a *crew* of men. Now—with Worthington's blowdown head—operation uninterrupted during regular short blowdown, with a shutdown for acid cleaning only once in almost a year, requiring only one man and three hours!

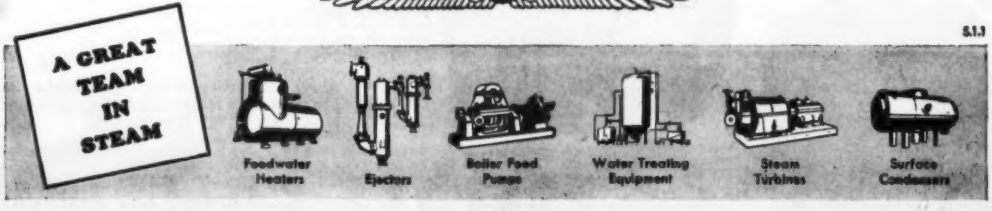
Worthington Makes Deaerating Equipment News

Developments like this, applicable to any deaerators operating under conditions of scaling, are typical of Worthington's engineering firsts in water treating and deaerating equipment.

Worthington manufactures all of the equipment needed in a complete water treating installation. For further information on why *there's more worth in Worthington*, address Worthington Pump and Machinery Corporation, Steam Power Div., Harrison, N. J.

WORTHINGTON

S.1.3



Our severest critics are right in our own plant!

CONTRASTING with the constant pressure for production in other departments at Warner & Swasey is the calm, methodical work of one group of our men. These men are our severest critics—our final inspectors.

By the time an assembled Pin Drafter reaches one of these final inspectors, its individual parts have already passed 6,000 inspections!

But that is not enough! The final inspector carefully rechecks the completed machine—*proves* beyond doubt that it is ready to turn out the high quality work for which it is designed. Only then does he *sign his name* to a written report certifying that the Pin Drafter he passes is as perfect as human skill can make it.

Like our other departments, "final inspection" is working day and night to get machines to our shipping platform on schedule. But despite stepped-up production and urgent delivery dates, *no* machine leaves our plant until it meets the long-established Warner & Swasey standards for accuracy and dependability.

BRANCH OFFICES:
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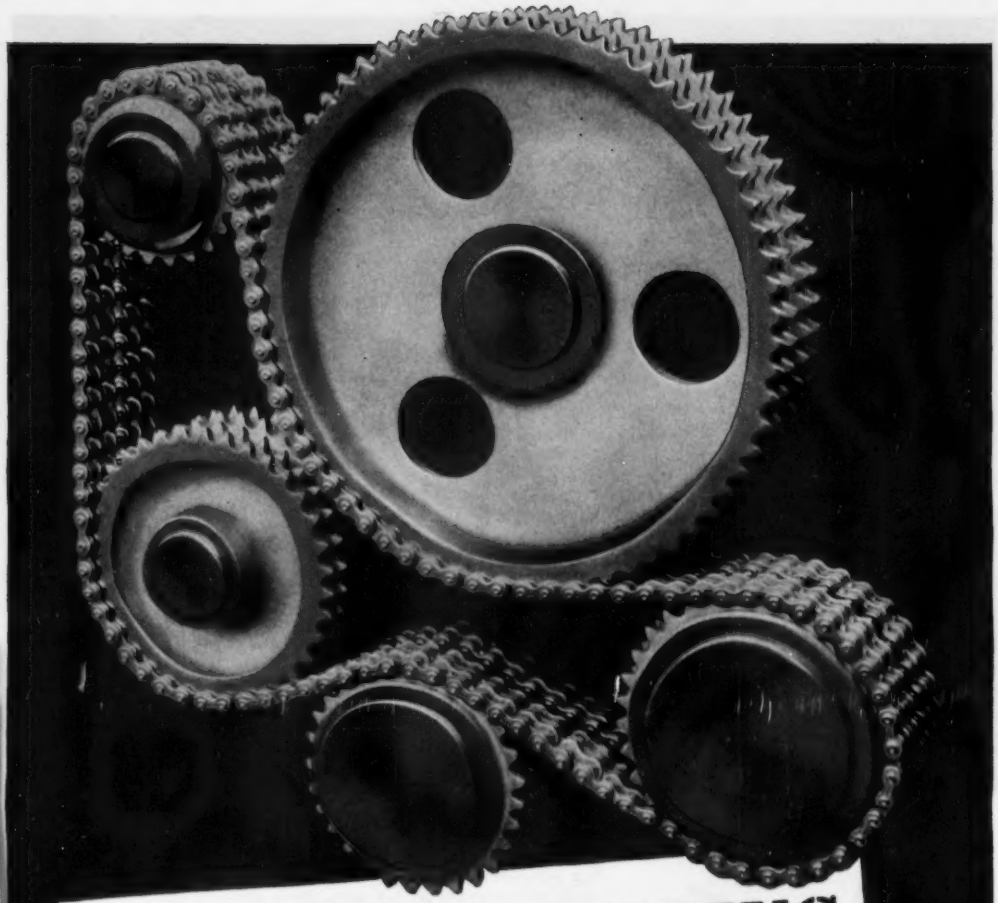
TEXTILE MACHINERY DIVISION

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS...WITH A WARNER & SWASEY



THE RIGHT SETTING
for a Whitney Chain Drive

Whitney Chain Drives Simplify Designs
Cut Costs of Complex Drive Mechanisms
Deliver Full Rated Horsepower

Shown above is a 5-point complex drive solved by Whitney roller chains. It clearly illustrates how the versatility of *Whitney Chain Drives will help you meet your design requirements* efficiently and economically.

Now take a look at the drive . . . see how the Whitney Chain is deeply seated in the sprocket teeth, assuring *positive grip*. Note that there can be *no slip* which means you get *full rated horsepower* from driver to driven mechanisms. This means machine output is maintained, highest transmission efficiency is always obtained . . . a vital factor in maintaining high production and product uniformity.

In addition, Whitney Chain Drives absorb shock loads without breakage. Their rugged construction assures long operating life with minimum maintenance. They save you time and money because they are easy to install, easy to remove without disconnecting shafts or bearings.

If your power transmission problems involve long or short centers, reversal of direction, timing motions, fractional or hundreds of horsepower, the unusual adaptability of Whitney Chain Drives will help you meet your design requirements efficiently and economically.

From the complete line of Roller, Silent and Conveyor Chain Drives, Whitney engineers can recommend, without bias, the proper type of drive for each application . . . the chain drive which will give you the best service at lowest cost.

Consult your local Whitney Field Office or Distributor, or write direct to us for complete information and catalog.

Whitney Chain Company
211 HAMILTON STREET, HARTFORD 7, CONNECTICUT

Have you discovered the "Hidden Values" of LUNKENHEIMER engineering devices?

LUNKENHEIMER
BOTTLE OILER
FIGURE 1815

★

STRETCH PLANT CAPACITY

★

CUT MAN-HOURS OF MAINTENANCE

★

REDUCE SAFETY HAZARDS

Your goal is fast, quality production. You install the best machinery and hire crack technicians. *Protect that investment* . . . keep your machinery humming at peak efficiency — with Lunkenheimer engineering devices.

Install Lunkenheimer Bottle Oilers at bearing points that are hard to reach and often neglected. Bottle Oilers *require less upkeep* and *cut accidents 'way down* on loom and card bearings in textile mills . . . on roller and fan shaft bearings of paper-making machines . . . in *every* plant where machinery moves. Pumps and all types of lubricators reduce costly maintenance shutdowns and eliminate the dangerous practice of hand-oiling moving machinery.

Don't overlook Lunkenheimer's *complete* line of engineering devices — pop-safety and blow-off valves, water gauges and gauge cocks, fusible plugs, lubricators for compressor and pump cylinders, and oil and grease cups. Get together with your Lunkenheimer distributor. He'll be glad to show how Lunkenheimer engineering devices will boost your output, cut accidents, and protect your overworked—and irreplaceable—machinery.

Write today for Circular 580 — the new bulletin describing Lunkenheimer Bottle Oilers, Oil Cups, and Constant Level Oil Controls. Address: The Lunkenheimer Co., Box 360R, Cincinnati 14, Ohio.

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THE ONE *Great* NAME IN VALVES

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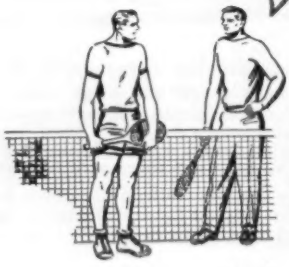
look at it from the retailer's angle



"They like the fine quality fabrics produced with those new Reading Machines. Why should we settle for less? And we can get 15 or more dozen pairs every 8 hours!"

• • •

The new "Reading" Machines are producing full-fashioned stockings of superior quality and at higher speeds than ever before possible. Many exclusive "Reading" features give higher precision in operation and greatly simplified control . . . 30 sections . . . 51 and 60 gauge.

TEXTILE MACHINE WORKS • READING, PENNA.

The "READING"
Full-Fashioned Knitting Machine

We Mobilize for Freedom

CONTROLS . . . A Two-Edged Sword

It may seem dangerously premature to talk about getting rid of emergency government controls while all-out war is still an imminent possibility.

But success in this strange struggle for our freedom into which the Russian Communists have plunged us requires that we:

1. Maintain a whole battery of controls designed to speed defense production and curb inflation, and at the same time

2. Work to end the controls at the earliest possible moment.

Here is the reason why this editorial—fourth in a special series on mobilization for defense—is devoted to the need for a speedy release from controls.

If the Russian Communists can force us to maintain indefinitely the present system of government controls, they will have won a tremendous victory. They will have saddled us with a system of collectivism which, over a period of years, would be fairly certain death to freedom of business enterprise.

Make no mistake about it. This is not an argument against emergency controls. We need controls now to break a right of way for our mobilization program through the business boom. Indeed, the third editorial in this special series was titled "Why Controls Are Necessary." It stressed both the need for controls and the need for positive cooperation to make them work.

Controls Can Undermine Our Economy

But these controls surely chisel at the foundation of our normal economic system. So long as we have them, many if not most key business decisions will be made in Washington bureaus rather than in the free market place. For example, the *National Production Authority* administers a *Controlled* Materials Plan (italics ours) which directs the flow of basic metals, and decides who can use them for what purposes.

Happily, the people who operate these controls are not using the methods of a secret police state.

Even more happily, most of the leaders who have been drafted to manage the controls are not in love with their jobs. They are doing their best in the thankless task of making controls work. They recognize the danger of chronic controls.

But the fact remains that our economy is

operating under arrangements which carry it a long way toward the pattern of centralized control the Russians would inflict on the world.

The Wilson Plan

A plan for getting rid of these controls has already been developed. It was put together by our Director of Mobilization, Charles E. Wilson—while he was working day and night to set up the necessary emergency controls.

The Wilson Plan—if we escape all-out war—will strengthen our defenses and our economy. By 1953, it calls for:

1. Providing the weapons to equip an armed force of 3½ to 4 million, together with a supply of weapons for our allies.

2. Building a stockpile of weapons which, with current production, would be sufficient to carry on an all-out war for a year.

3. Building the manufacturing capacity by which we could rapidly expand our production of weapons if all-out war should come.

4. Increasing the productive capacity of industry enough to resume the expansion of our civilian economy.

With these jobs done our economy would be big enough and strong enough to meet both civilian and military requirements. And the government controls needed for mobilization could be speedily dropped.

Call for Sacrifice

The Wilson Plan requires a major effort—it means spending more than $50 billion a year for mobilization. That is almost 20 percent of our total production. And this cannot be done without sacrifice. For a time, particularly in the next year, living standards will drop.

But the sacrifice required is amazingly small. At the peak of the defense effort, civilians will still have available to meet their needs about as much as they did in any year before 1948.

To make the Wilson Plan succeed we must curb inflation. A second year of inflation such as that which we have had since the Korean war started would multiply disastrously the costs of our defense program. One key part of a successful program to curb inflationary pressure, which soon will be building up again, is a pay-as-we-go tax program. The second editorial in this series urged that we do our utmost to pay as we go.

We Cannot Out-Control the Communists

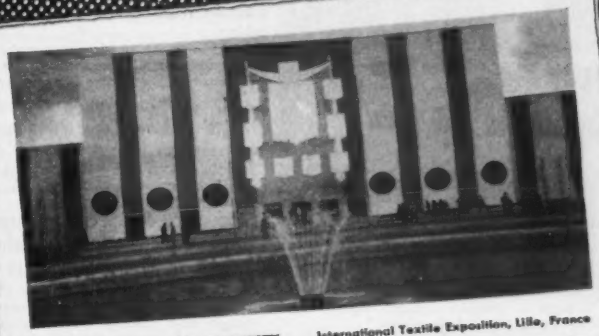
But, above all, to make the Wilson Plan work we must keep our sights set on the crucial importance of increased production. Our problem is to increase our capacity to produce so that we can carry both a major military program and an expanding civilian economy for as many years—General Bradley thinks it might be fifteen or twenty—as the menace of Russian Communist aggression persists.

If we do not produce enough to do this double job, we shall be confronted with the prospect of having to live indefinitely under government controls of the sort that have been set up since the start of the Korean war. That would be delightful to the Russian Communists. It would go far toward making over our economy on the Moscow model.

Even if we wanted to, we never could hope to out-control the Russians. They are miles ahead of us in that line. But we can out-produce them, by a tremendous margin. By doing that we shall travel the surest road to victory.

McGraw-Hill Publishing Company, Inc.

Vol. 101; No. 7 . . . . . TEXTILE WORLD . . . . . July, 1951



International Textile Exposition, Lille, France

LILLE TEXTILE SHOW

Exhibits Many Improvements

At the International Textile Exposition, Lille, France —

- Whitin's comber was the "hit"
- German manufacturers return in force
- New machines included —
  French circular loom — German and Swiss sectional warpers — Swiss selvage trimmer — British, Swiss, and German automatic winders.

By P. M. THOMAS, Editor, TEXTILE WORLD

LILLE TEXTILE SHOW
Exhibits Many Improvements

THE INTERNATIONAL TEXTILE EXPOSITION at Lille, France, was impressive for three reasons: (1) German machinery manufacturers are back in the market, (2) Swiss manufacturers continue to improve their machinery, and (3) manufacturers of all countries continue to develop new machines.

I talked with many people from other countries, and a majority of them seemed most intrigued with Whitin Machine Works' Model-J comber. As one Frenchman put it: "You see *la ma-chine Whi-tain?*" Other American exhibitors—Draper, Tompkins, Hemphill, Crompton & Knowles, and others—drew large crowds. But my impression was that Whitin's comber could easily be called the "hit of the show."

For Americans already familiar with the American machines shown, I think probably the most interesting things at the show were the improvements in Swiss machinery and one or two new British machines.

Pictures and captions on these pages give some idea of the direction textile-machine research in other countries is taking.

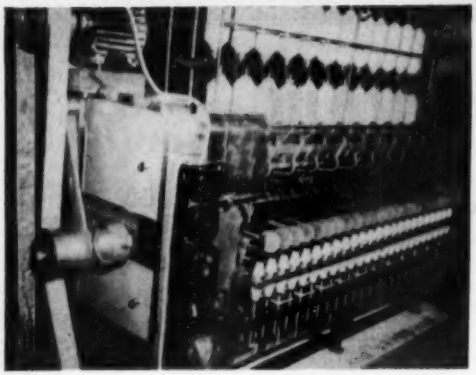
One interesting development that could not be photographed was the Texylon treatment of piece goods with a silica solution to increase breaking strength and resistance to abrasion. The treatment is licensed by S.T.A.T. (Société pour le Traitement et l'Amélioration des Tissus), 12 Rue Tronchet, Paris 8, France.

The process makes use of normal silica. The impregnating material consists basically of one molecule, in contrast to the complex molecular structure of older products on the market.

Impressive comparisons of abrasion resistance between treated and untreated fabrics were shown by photographs.

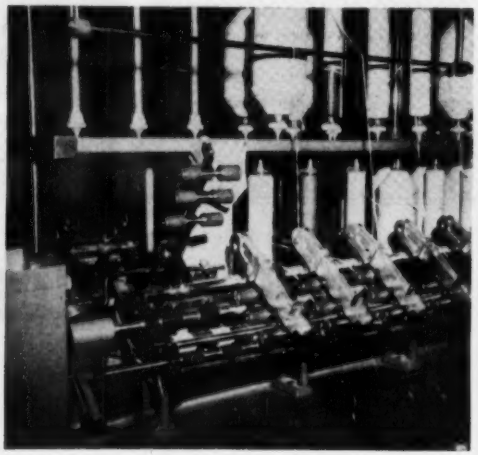
An important development in the machinery field is the nylon-fabric

SPINNING MACHINES AND EQUIPMENT



Moving Ring and Spindle Rails

MORE UNIFORM YARN and better yarn ballooning from start to the finish of a bobbin are said to be produced on this spinning frame that has both the ring rail and spindle rail traversing. The machine was shown by Marzoli Freres & Co., Brescia, Italy.



Pendulum-Arm Roll Weighting

A PENDULUM-ARM ROLL-WEIGHTING arrangement (known as SKF-Norma) was demonstrated by Vereinigte Kugellagerfabriken, Stuttgart, Germany. It consists of a single unit composed of a roll saddle and top-roll arms. The arms serve as holders and guides for the top rolls, eliminating standard cap bars. One advantage pointed out is that the ends of the top rolls are free, and roving ends may be fed to the rolls from the positions ordinarily occupied by the cap bars. Main advantage, however, is that the assembly permits self-alignment of the top rolls with the bottom rolls.

stabilizing machine made by Sanderson & Co., 16 Cumberland St., Manchester, England. The machine is so large that it was not brought to the show. However, it was illustrated by wall pictures and explained by Sanderson representatives.

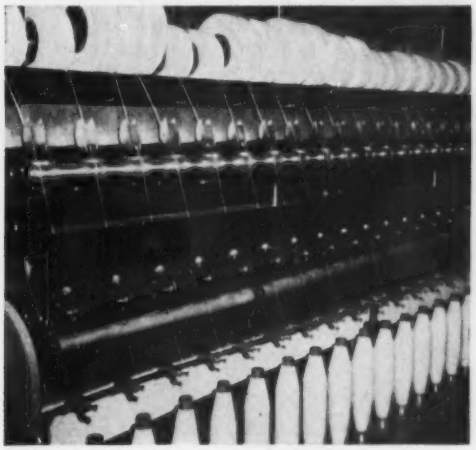
The machine consists essentially of a steaming cylinder and controls for proper heat treating. The cylinder rests on heavy legs. It has a round door that is held shut by heavy screws and wing nuts similar to those used on raw-stock- and package-dyeing machines.

A carrier truck on metal runners is used directly in front of the cylinder door. Rolls of cloth to be set are placed on a frame that also travels on the truck. The truck is pushed to the door of the cylinder, and the frame supporting the rolls is pushed off the truck into the steaming chamber.

A panel-front control unit beside the steaming cylinder controls steam pressure and time of steaming.

Whitin Comber a "Hit of the Show"

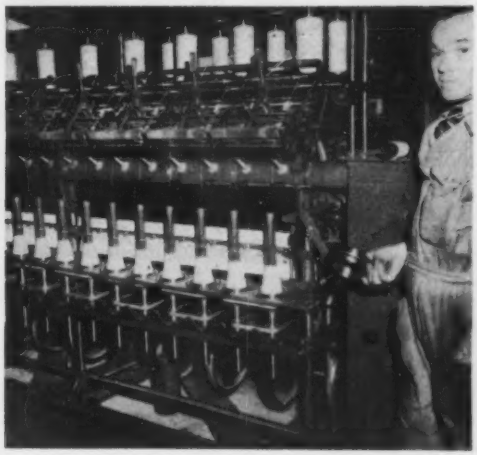
THE WHITIN MODEL-J COMBER, built by Whitin Machine Works, Whitinsville, Mass., shown last year at the Atlantic City show, was said by many to be the "hit of the show" at Lille. Other Whitin machinery also drew crowds of spectators. Whitin's Pres. Hugh Bolton and his son, Hugh, Jr., are shown in the Whitin Machine Works booth at Lille.



Woolen-Spinning Frame

A WOOLEN-SPINNING FRAME, about two years old, was shown by Spinnbau, Düsseldorf, Germany. Latest features of the frame include: (1) a fixed ring rail with a shaft that extends into the frame head to drive the spindles by gears; (2) knee brakes for stopping spindles; (3) a porcupine roll that controls the feed of the roving from the creel package to the drafting fingers and lower draft rolls; and (4) a system of draft-control fingers to control the feed of the roving from the porcupine roll to the lower set of draft rolls.

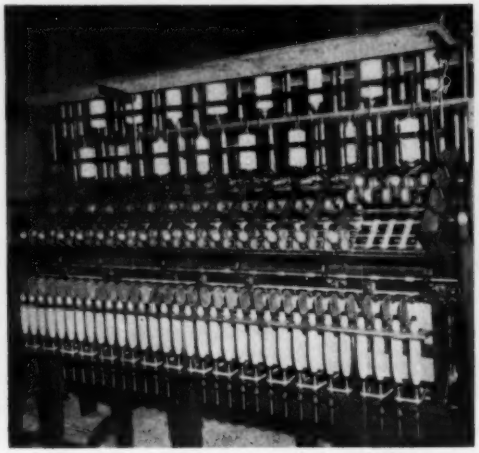
Drafts of 15 to 100 are possible on this machine.



Revolving Twister Rings

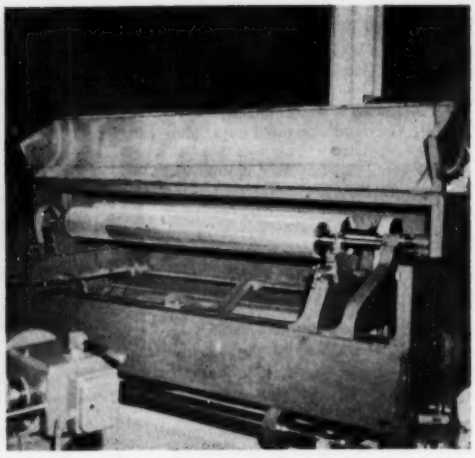
DRIVEN TWISTER RINGS are used on the new twister shown by O.M.C.S.A., Borgomanero, Italy. The ring is mounted in a ball-bearing race and has a tape-drive flange that extends below the under side of the ring rail. Four rings (two on each side of the frame) are driven by one tape. The tape circles an individual driving pulley mounted on a shaft driven from a motor in the head end of the frame.

Two motors are used—one to drive the spindle-drive shaft and one to drive the ring-drive shaft. Usually, spindles run at 8,000 rpm. and rings at 6,000 rpm.



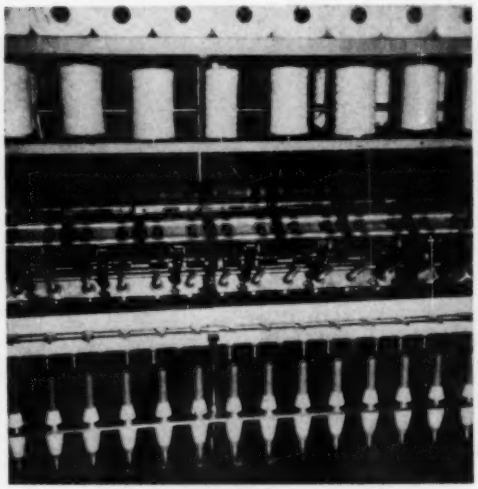
Top-Roll Holders

A SELF-ALIGNING, spring-weighted top-roll system for spinning frames was shown by Isotta Fraschini, Cavaria, Italy. The holders serve as saddles, cap bars, and weighting device.



Double-Duty Grinder

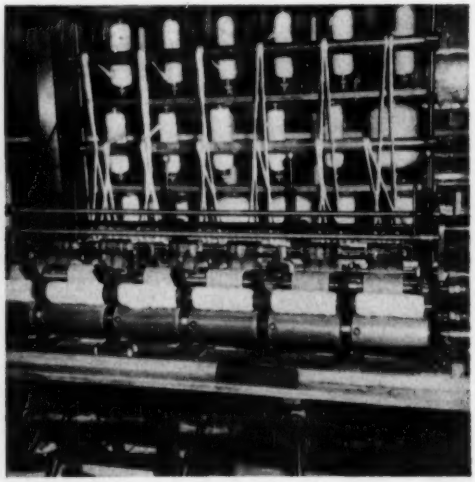
GRINDER for wool-card workers and strippers, equipped with both a cover and dust collector, was shown by Dronsfield Bros., Ltd., Oldham, England. The grinder can sharpen two rolls at a time, runs at either 112 or 450 rpm.



Worsted-Spinning Frame

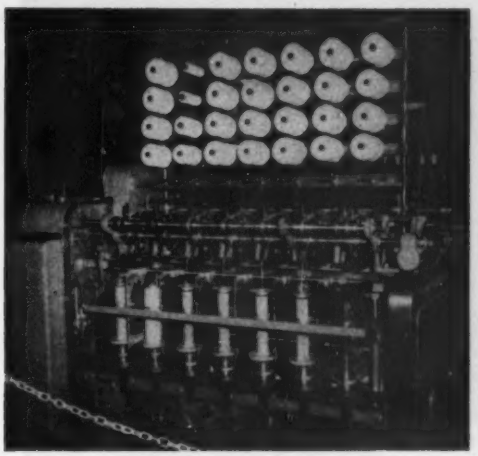
A WORSTED RING SPINNING FRAME that incorporates a stationary ring rail was demonstrated by Spinnbau, Düsseldorf, Germany. This feature, which gives uniform yarn ballooning over the whole bobbin, is said to yield more uniformly drafted and twisted yarn. Irregularities caused by spindle slippage where spindles are driven by tapes are said to be avoided by having spindles on this frame gear-driven.

On this frame and also on Spinnbau's woolen frame with a stationary ring rail, laying the yarn on the bobbin is accomplished by a traversing spindle rail.



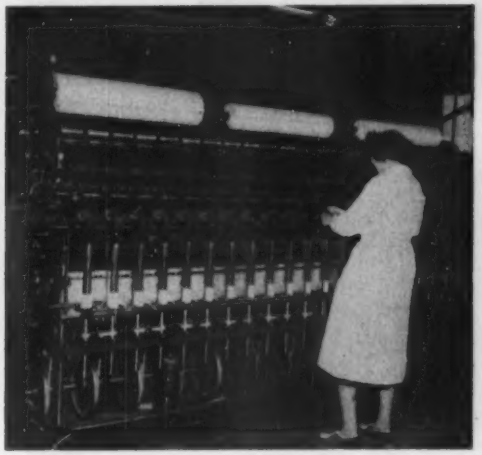
Needle-Bar Gill

A GILL that uses one group of needles, instead of two as in its standard gill, was shown by Deutscher Spinnereimaschinenbau Ingolstadt, Ingolstadt/Oberbayern, Germany. The needle bars are placed in horizontal holders instead of a circular holder. Roving doublings are the same, but draft is reduced from the standard gill's 7 to 8 to a draft of 5 to 6 in this simpler gill. The horizontal setting of the needle bars is said to make possible better sliver guidance and control in the drafting field. Ingolstadt recommends seven passages with this machine to obtain the same quality that eight or nine passages on standard gill gives.



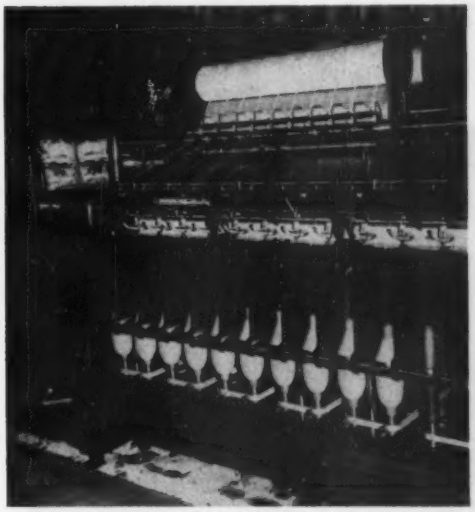
Ring Doubling Machine

AN IMPROVED RING DOUBLER for plying soft woolen yarns of two to eight ends was shown by Carl Hamel, Arbon, Switzerland. Production per spindle is about 10 lb. of plied yarn per 8 hr.



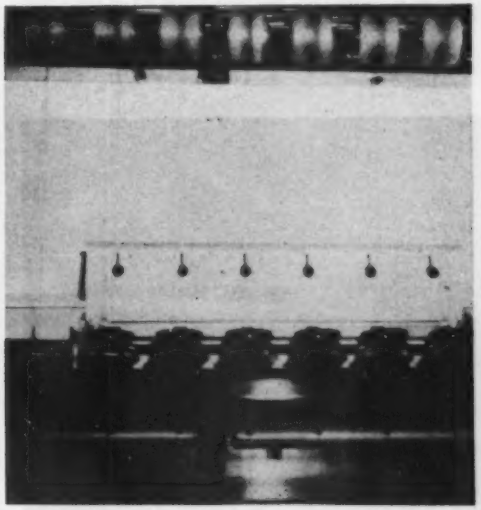
Cotton or Wool Frame

A LARGE-PACKAGE spinning frame for wool, cotton, or cotton waste was shown by O.M.C.S.A., Borgomanero, Italy. Rings installed here are 4 in., but 5-in. rings can be used. Maximum draft is 3.



Large-Package Woolen Frame

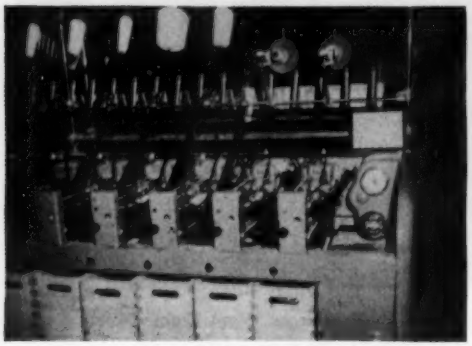
NEW LARGE-PACKAGE WOOLEN-SPINNING FRAME shown by Platt Bros. Sales Ltd., Oldham, England, model MWR 1, comes in ring diameters from 3¾ in. to 5½ in., which allow a wide range of yarn numbers to be run with a maximum of production. Swing-down jack-spool cradles, hinged plastic separators between bobbins, ease of operation and accessibility, and simplicity of maintenance are other features of the machine.



Bremer's Twisting Device

PRELIMINARY TWIST is given woolen roving on Bremer's ring spinning frame by the rotating, revolving rolls enclosed in these 2½-in. heads. A pair of small rolls revolve against each other to feed the end from the upper rolls to the spindle. Twist from the spindle goes as far as the feeding heads. The rolls in the head also revolve end-by-end. Shown by Bremer Spinnereimaschinenbau-Gesellschaft, Bremen-Farge, Germany.

WARPING AND WINDING EQUIPMENT

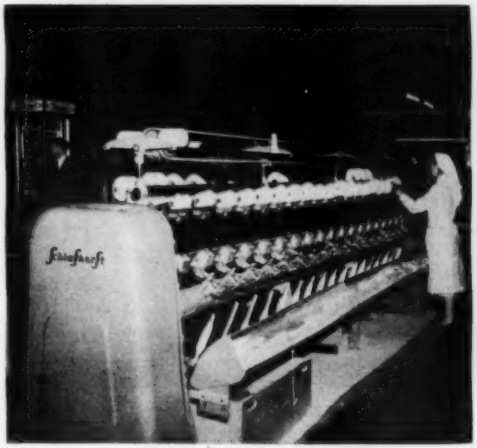


Automatic Quiller

AN AUTOMATIC QUILLER for winding all types of yarn on loom quills was shown by W. Schlafhorst & Co., M. Gladbach, Germany. The quiller operates at spindle speeds up to 12,000 rpm. and yarn speeds up to 800 meters per min.

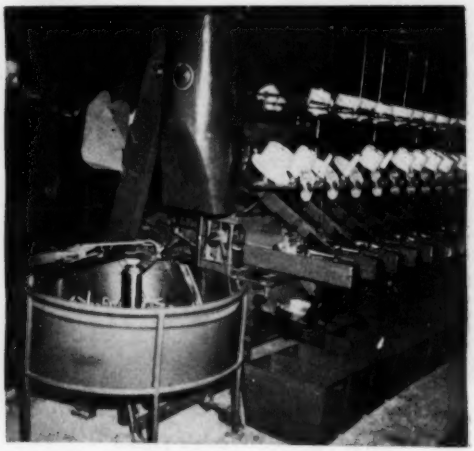
Sectional Warping Machine

A SECTIONAL WARPER with a drum circumference of about 8 ft. 2 in. was shown by Benninger Engineering Co., Uzwil, Switzerland. Shown above, in the foreground near the right, is a partly wound beam in doffing position. A motor-driven shaft and arms will swing the beam forward to the floor or onto a dolly. Behind the wound beam and in the center of the photo is the winding drum. Immediately behind it is the lease reed that guides the warp section onto the beam. In the background is the creel used with the drum.



German Cone Winder

A CONE WINDER for cotton and woolen yarns was shown by W. Schlafhorst & Co., M. Gladbach, Germany. Winding speed is 1,000 meters per min. The winder is equipped with an automatic feeding device, an electric stop motion for yarn breaks, a conveyor for full and empty cones, and pneumatic cleaning for the yarn-tension devices.



Schweiter Winder Feed

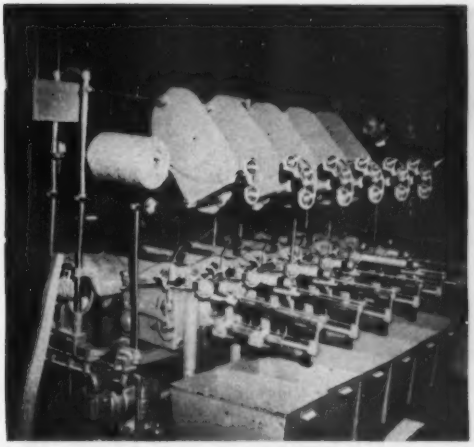
AN AUTOMATIC QUILL-FEEDING arrangement for its filling winder (sold in the United States by Whitin Machine Works) was demonstrated by Schweiter Ltd., Horgen-Zürich, Switzerland. A hopper at one end of the winder holds the empty quills. A conveyor picks up the quills and distributes them to the various winding heads.

Swiss Filling Winder

A FILLING WINDER, equipped with new automatic motions for self-feeding empty quills and conveying full quills to a magazine box at one end of the winder, was shown by Schärer Textile Machine Works, Erlenbach-Zürich, Switzerland. Another new improvement on the Schärer machine is suction removal of lint.

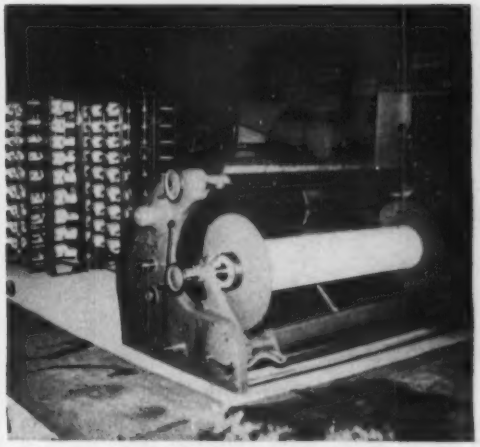
Sewing-Thread Winder

SEWING THREAD is wound in single or multiple ends on this automatic winder shown by Muschamp Taylor Ltd., Manchester, England. It is being watched by H. L. Muschamp, managing director. The winder is equipped with indicators for yardage wound and spindle revolutions. Doffing and start-up after doffing are automatic.



Hollow-Cop Winder

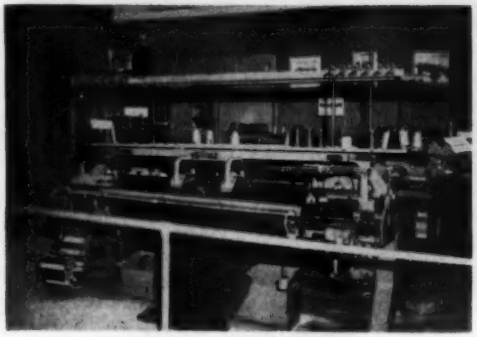
YARN PACKAGES are wound without bobbins on the hollow-cop winder shown by Schweiter Ltd., Horgen-Zürich, Switzerland. Yarn is wound on a horizontal spindle. The spindle is removed, the cop of yarn doffed, and the spindle started winding again automatically. The winder is for use with coarser yarns such as jute.



Automatic Warper

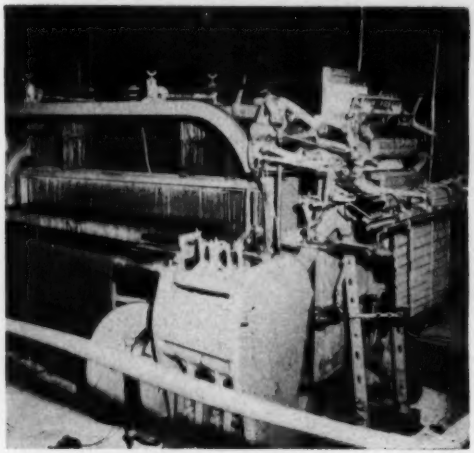
A BEAM WARPER with a winding speed of 600 meters per min. was exhibited by W. Schlafhorst & Co., M. Gladbach, Germany. Automatic means for doffing full beams is provided. The warper can be supplied in a design specially suited for warping soft beams of dyed yarn. In this model, beaming pressure is controlled hydraulically.

WEAVING AND KNITTING EQUIPMENT



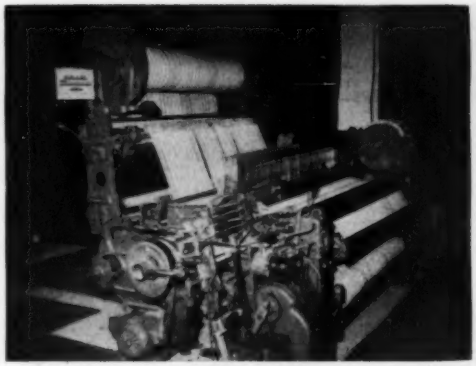
Liba's New Tricot Machine

A NEW TRICOT MACHINE made in 90-, 120-, and 150-in. widths, manufactured by Liba Machine Co., was shown by Somatex, 22 Rue Hamelin, Paris.



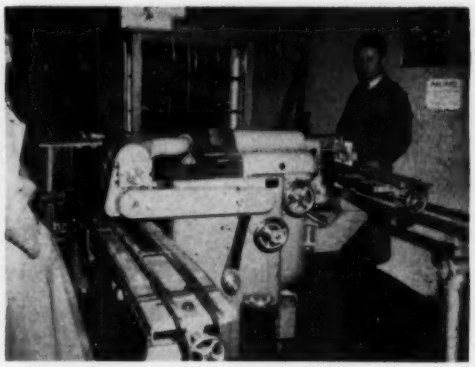
33-Harness Dobby Loom

NEW ASTRA WOOLEN LOOM, model GM, manufactured by Bergdorfer Eisenwerk A. G., Astra-Werke, Hamburg-Bergedorf, Germany, has a low arch and a dobby motion wide enough to take up to 25 and 33 jacks and harness frames. All principal shafts fit into interchangeable bearings.



New Terry-Cloth Loom

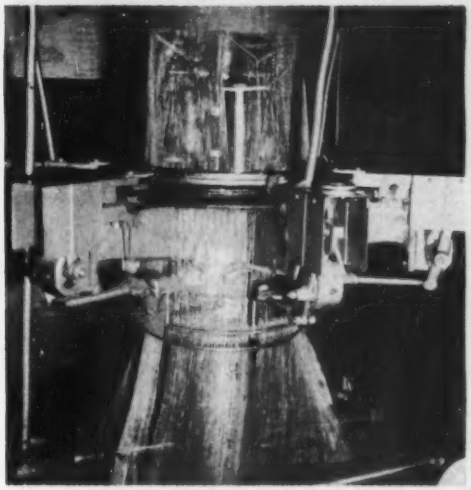
A THREE- and FOUR-PICK TERRY LOOM was shown by Adolphe Saurer, Arbon, Switzerland. Improvements to terry looms are said to be: (1) mechanical stop motions for both ground and pile warps, (2) harnesses driven from underneath the loom by a two-cylinder dobby driven by gears, (3) terry motion placed outside the loom for ease in making adjustments, (4) filling stop motion that stops the loom before pile-warp delivery so that no adjustment to the warp need be made before a broken pick can be repaired, and (5) all motions are centralized on one shaft.



Brush Cleaner for Reeds

REEDS ARE CLEANED AND POLISHED by this machine shown by C. C. Egelhaaf, Reutlingen, Germany. The 14-in. rotary brush runs through the reed from the lower to the upper binding. When brushing is completed according to the brushing cycle the machine is set for, two pumice stones are lowered onto the reed for the polishing cycle.

Direction of brushing and polishing are changed automatically. The cleaned and polished reed is pushed forward automatically so that it can be taken out and another put in cleaning and polishing position.



The Fayolle-Ancet Loom

A CIRCULAR LOOM that weaves tubular cloth at the rate of 160 to 180 ppm. was demonstrated by Fayolle & Co., Lyon-Villeurbanne, France.

Two ordinary beams of warp are mounted at the bottom of the loom, and the ends are drawn through a circular reed above the beams. The ends are then entered in double circular sectional harnesses to form two warp sheets. Above the harnesses is a circular stationary reed through which the warp is entered and on which the shuttles ride.

The reeds, harnesses, shuttle blocks, and beat-up motion are all secured to a central upright shaft driven at its lower end by a motor.

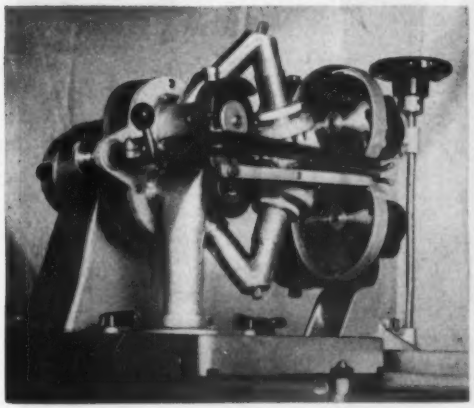
The shuttles consist of round metal containers in which hollow-cop yarn is placed. The inside yarn end is threaded through a heavy metal needle above the container. This needle lays the yarn in the warp shed ready for the beat-up.

The shuttles are held in position and are driven by magnetic blocks secured to the central shaft.

The beat-up motion consists of a ring gear equal in diameter to the path of the shuttle and a wheel that follows each shuttle. The wheel has teeth that mesh with the ring gear and extend beyond the ring-gear teeth. The wheel teeth force the pick tightly into the cloth between each pair of warp yarns.

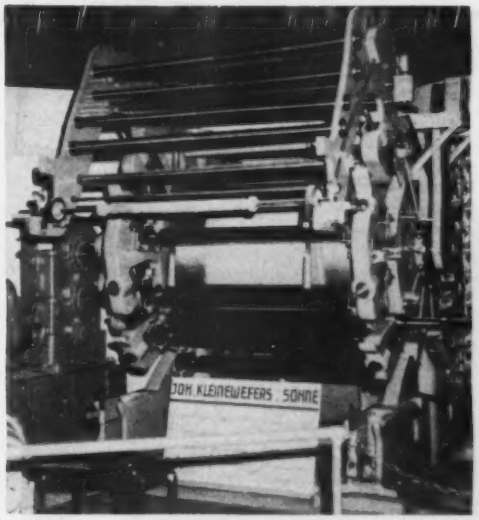
Cloth take-up rolls are located above the beat-up ring.

FINISHING EQUIPMENT



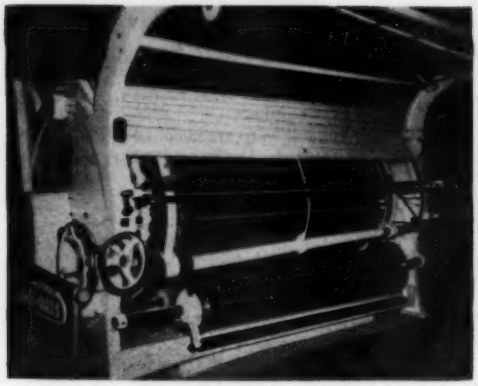
Swiss Selvage Trimmer

WEFA TRIMMING DEVICE for splitting filling loops formed along the selvage of cloths woven on multi-shuttle looms was shown by Arthur Gabrian, Rapperswill, Switzerland. Rotating blades cut the loops and the loose ends. These are then trimmed off by a filling trimmer called Gara.



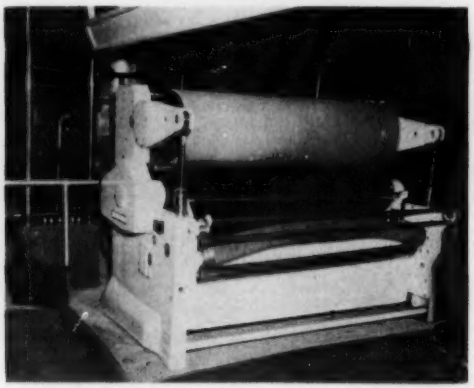
Roller-Printing Machine

A 10-COLOR ROLLER-PRINTING MACHINE that has a pattern-register adjustment by means of positive gearing was demonstrated by John Kleinewefers Sons, Krefeld, Germany. Features of the printer include: (1) a swinging arrangement for the ratio-gear casings so that only two sets of gears are needed for the complete range of print-roll diameters, (2) independent motor drive for the doctor blades, and (3) roller bearings. Printing speeds up to 85 yd. per min. are obtained.



Monforts' Napping Machine

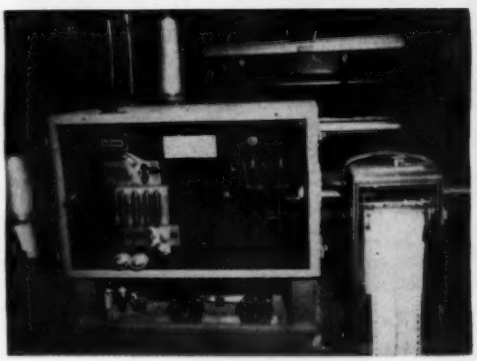
A NAPPING MACHINE equipped with an individual motor built in was shown by A. Monforts Maschinenfabrik, M. Gladbach, Germany. The motor is connected to the drum by a friction clutch. Cloth speed can be adjusted at 6 to 18 meters per min., and napping action is adjustable by changing the friction drive of the napping rolls.



Fulling Machine

PNEUMATIC FULLING MACHINE shown by A. Monforts Maschinenfabrik, M. Gladbach, Germany, model PF/10, has two rolls of 400-mm. (15 ¾-in.) diameter. The top roll is covered with medium-soft rubber and the bottom roll with hard rubber. Pressures are pneumatically controlled from 0 to 26,500 lb.

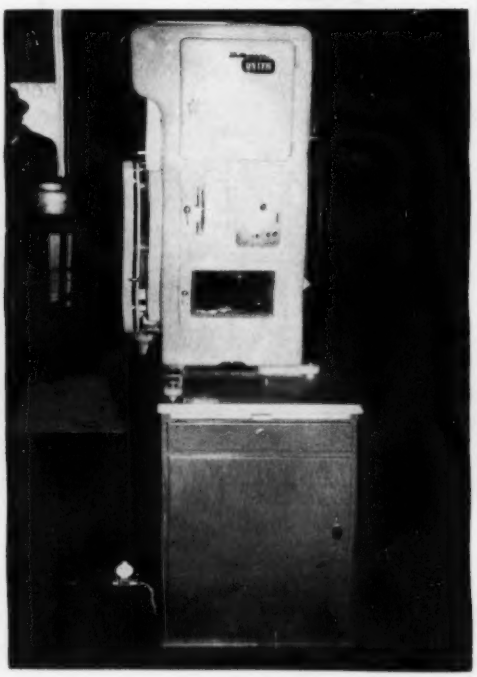
INSTRUMENTS



Uster Tester for Filament Yarns

FILAMENT-RAYON YARN and other synthetic-fiber yarns are tested for evenness on the type-C Uster tester demonstrated by Zellweger Ltd. (Uster), Zürich, Switzerland. The yarn range is 10 to 10,000 den.

The type-C tester is similar to the well-known models A and B in use in many cotton, woolen, and worsted mills.



How Some American Exhibitors Looked at Lille . . .

AMERICAN MANUFACTURERS or their representatives exhibited in this area. Visible are booths for Toledo scales, Takk static eliminators, Saco-Lowell Shops, and Crompton & Knowles Loom Works.

Draper Corp.

Tompkins Bros. Co.

Saco-Lowell Shops

Universal Winding Co.

Armstrong Cork Co. & Foxboro Co.

Hemphill Co., Supreme Knitting Machine Co., and Stop-Motion Devices Corp.

Uster Strength Tester

A YARN-STRENGTH TESTER that registers six breaking-strength values was demonstrated by Zellweger Ltd. (Uster), Zürich, Switzerland. With the yarn-rupture time set at 20 sec., about 120 breaks can be recorded per hour.

The six values recorded are: (1) single-break strength, (2) single-break elongation, (3) the sum of the yarn breaks made, (4) the sum of the elongations, (5) frequency distribution of the breaking strength, and (6) the number of breaks made in the test.

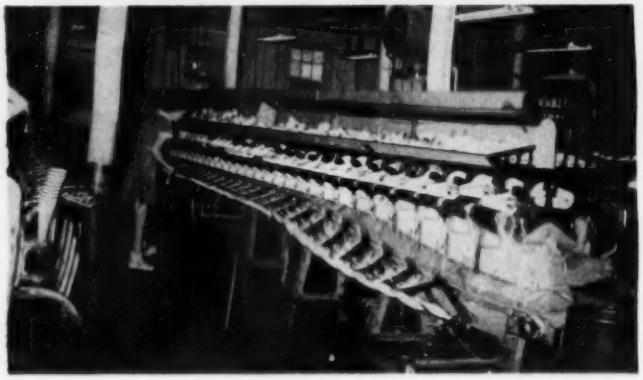
Continuous Lap Tester

A PICKER-LAP TESTER that charts variation electrically was shown by Deutscher Spinnereimaschinenbau Ingolstadt, Ingolstadt/Oberbayern, Germany. A lap is mounted on one side of the machine, threaded between two electrically weighted rolls in the middle of the top of the machine, and wound up on a lap take-up pin on the right side of the machine.

The top center roll raises and lowers in response to the lap thickness as the lap runs between the rolls. Raising and lowering of the roll causes changes in the electric current in the control box. These changes are used to drive a recording pen on a chart.

The tester can be used at the front of a picker so that continuous testing is done.

COMBERS process two-thirds of Gurney's yarn. A total of 480 doublings are used in combed-yarn preparation.



WINDING is one of Gurney's keys to quality. Clean, accurately set slub catchers and closely controlled waxing disks receive special attention.

How Gurney Keeps YARN QUALITY High

▶ *Rigid control all the way, with special attention to winders and waste, is the key to high-quality yarn at Gurney Mfg. Co.*

By E. DALTON WHITE *McGraw-Hill Atlanta Bureau*

"IT IS LESS COSTLY to catch a mistake in yarn preparation before it reaches the winder, or at the winder, than it is at later processes," says Frank S. Pittman, Jr., superintendent of the Prattville, Ala., plant of Gurney Mfg. Co.

The mill maintains rigid quality control at each process, from selection of raw cotton to finished product; but greater emphasis is placed on the preparation of the knitting yarn.

Because of the wide variety of knit goods manufactured, yarn control is essential in maintaining high quality in the finished products. Control even applies in the selection of raw cotton. It has been found that best results are obtained from cotton purchased within a radius of 100 mi. of the mill. Preference is given to 1⅛- and 1⅛-in. Strict Middling cotton grown in the Selma area (Black-belt cotton). This cotton usually requires less preparation, and it takes a good bleach and dye. The mill does both package and piece-goods dyeing.

The mill produces both carded and combed yarns. Two-thirds of its yarn is combed. A total of 480 doublings goes into the combed-yarn process.

The standard twist multiplier used is 3.50, but for special yarns the multiplier is dropped to as low a multiplier as 3.17.

Wax is used on the yarn to help lubricate the knitting needles and to make loops smoother. However, great care is exercised to prevent too much wax. The mill experimented with a soft wax and no wax at all on its yarn, but it found that light waxing produces better results. All wax used at the winders is disk-molded in the mill shop.

Gurney does its own package dyeing and conditions all yarn in a steam room. Yarn remains in the steam room about 4 hr., or longer if necessary, to bring the moisture content up to 7 or 7½%.

Conditioning in the steam room is scheduled to allow a continuous flow of yarn to the knitting room.

One of the most important factors in the preparation of knitting yarn, Mr. Pittman points out, is winding. He feels that care at this point in processing will eliminate much trouble later.

Winders are thoroughly checked, oiled, and cleaned on each shift. Special attention is given to proper setting of the blade-and-comb slub catchers. The combs are inspected frequently and kept clean. The settings of the slub catchers are checked each shift.

It has been found that the slightest slub in the yarn used for knitting will be likely to make a hole in the fabric or cause a needle to break. Proper slubbing also makes back-winding unnecessary.

On the 28s single combed yarn, the setting of 9/1000 on the blade and 25/1000 on the cone is considered proper for best results.

Proper twist is considered as important as proper slubbing, and control

(Continued on page 202)

WARPING, SLASHING, AND WEAVING section at the Northern North Carolina-Virginia Div. was led by Cecil J. Squires, Fieldcrest Mills, Inc., Leaksville, N. C. Other operations were discussed in separate group meetings. G. R. Ward, Highland Cotton Mills, Inc., High Point, N. C., is chairman of the division.

TESTING EQUIPMENT and techniques were demonstrated at the Eastern Carolina Div. by Dame S. Hamby (right), School of Textiles, N. C. State College. Looking on are, left to right, Bill Stuckey, N. C. State College; Leo F. Katkaveck, Bynum Neal, and Virgil E. McDowell, Roanoke Rapids, N. C.; and Jack Scott, Durham Hosiery Mills.

Spinning and Weaving Ideas Aired

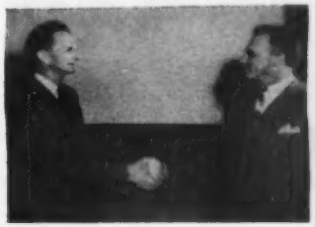
At Spring STA MEETINGS

Subjects discussed at Eastern Carolina, Northern North Carolina-Virginia, Piedmont, and South Carolina Div. meetings of the Southern Textile Assn. included—

1. *Fiber testing*
2. *Carding and spinning*
3. *Warping, slashing, and weaving*

Here are the technical highlights brought out in the discussions—

THIS IS A TECHNICAL REPORT of what was said at the spring STA meetings. We have included only those items that we think you, the mill man, will be interested in. We have written it in concise and condensed form for easy reading. It is broken down into three sections; fiber testing; carding and spinning; and warping, slashing, and weaving.



NEW CHAIRMAN of the Eastern Carolina Div., J. E. Shaw (right), Rosemary Mfg. Co., Roanoke Rapids, N. C., is congratulated by the retiring chairman, J. R. Meikle, of the same mill. New members of the executive committee are J. K. Bruton, Erwin Mills, Inc., Durham, N. C. and Al Phillips, Edenton Cotton Mills, Edenton, N. C.

J. A. CHAPMAN, JR. (right), Riverdale Mills, Enoree, S. C. was elected chairman of the South Carolina Div. to succeed J. C. Godfrey (left), Calhoun Mills, Calhoun Falls, S. C. Joseph F. Chalmers was elected head of the carding and spinning section of the division. The spring meeting was held at Parker High School in Greenville, S. C.

1. Fiber Testing

▶ Staple length, grade, fineness, strength, and maturity ratio of fibers should be known if you have to meet definite fabric specifications. The maturity of cotton is also important. Some of these tests will mean more to you than others will. One mill, which makes very heavy yarn for cord, has found that fiber strength is the most important factor in the manufacture of the cord. To this mill, fiber fineness does not mean much. In fine-yarn mills, fiber fineness may be just as important as fiber strength.

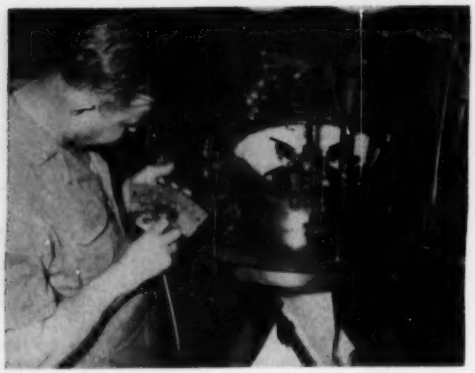
▶ **The strength of yarn** can be predicted from staple length, fiber strength, and fiber fineness. According to Prof. D. S. Hamby, School of Textiles, N. C. State College, Raleigh, N. C., the trend is for mills to buy cotton according to specifications. A few mills use tests of fiber properties to purchase their cotton now; and more mills are buying by specifications, just as they sell their yarn or fabric.

▶ **You can help control neps,** make better blends, and set your machines more accurately if you know the properties of the fibers you are running. For example, fine fibers tend to nep more than coarse fibers; immature fibers will also have a high nep count.

(Continued on page 194)

Extra No. 1

THIS HALF-PINT FRUIT JAR acts as an oil reservoir to keep oil flowing through a wick in the copper tube to the cams and sinkers. Lint is flushed out and gumming is prevented. Jaco found that standard oil cups did not do the job they wanted. Now their operation is more efficient, and wear has been reduced.



Extra No. 3

PERIODIC INSPECTION of sections, cams, and sinkers for accurate setting and efficient operation is a major factor in quality control at Jaco. Holes, drop stitches, and other defects are reduced. Cams are removed and polished when they operate with the slightest rigidity.

Extra No. 2

SMALL PACKAGES are accumulated and then used on one machine at Jaco. This system saves downtime and yarn and keeps other machines knitting without interruption. Since cones do not run out evenly, all cones are removed from production when the package is down to about ¼ lb. and saved for this machine.

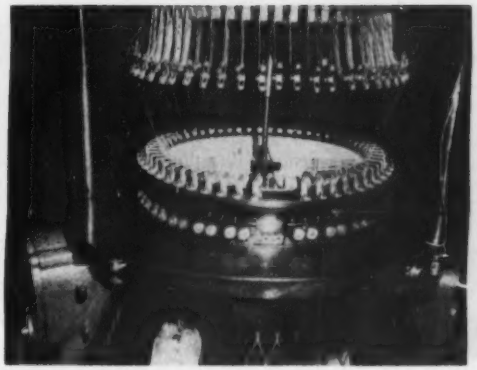
Extra No. 4

"MACHINE CLEANLINESS is one requisite of quality knitting, and frequent blowdown with air is a sure way to prevent lint accumulation," demonstrates Jaco Knitting Supt. Lewis Payne. Clogged needles cause bending, and bent needles cause irregular knitting. Bent or worn needles are immediately replaced. Needle slots are cleaned, and new needles inspected before insertion.

11 "Extras" That Help KNITTING QUALITY

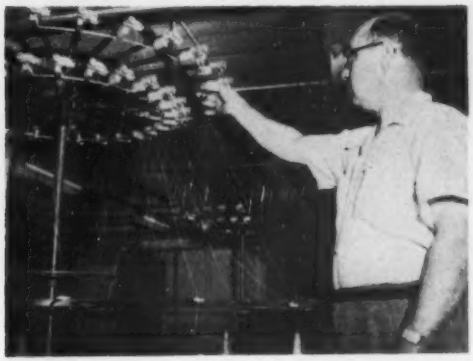
By E. DALTON WHITE, *McGraw-Hill Atlanta Bureau*

Common-sense "gadgeteering" has helped Jaco Knitwear, Inc., Griffin, Ga., and Gurney Mfg. Co., Prattsville, Ala., to reduce machine stoppages and get higher-quality knitting. Jaco and Gurney follow all of the regular rules of fine machine adjustments and adequate lubrication, too. But their interest in some smaller details has produced a "satisfaction margin" of extra quality and fine workmanship.



Extra No. 5

BAD HOLES IN THE KNITTED FABRIC can be caused by a slub or lint in the needle eye. Yarn with thin ends results in holes. Tight yarn will cause a hole to develop and make a horizontal streak. Clean yarn and proper tension develop from rewinding at Gurney.



Extra No. 6

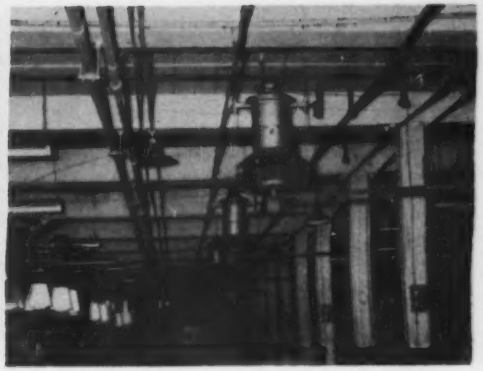
UNIFORM TENSION is obtained throughout the machine by first determining the need at one point. This is accomplished at Gurney by hanging a light weight on an S-shaped piece of wire until proper tension is obtained. This tension then becomes standard for other points.

Extra No. 7

▶A wire loop fastened on the bottom stop-motion-control box of the Wildman spring-needle machines has resulted in more uniform tension and better needle feed. The loop is set between the top two eyelets or yarn-feed holes. The yarn path is: through the top feed hole, over the wire loop, through the second feed hole, past the control finger, and through the third feed hole to the needles.

Since this arrangement places tension in the yarn before it reaches the needle, there is no looseness before knitting. A more even fabric with a better hand is Jaco's result.

Jaco uses 20s and 24s combed yarn to produce jersey and rib T-shirts for men and boys. Part of the production facilities are being devoted to Navy orders. The mill does its own bleaching, dyeing, and sewing.



Extra No. 8

INSTALLATION OF ATOMIZERS and maintenance of 65 to 70% relative humidity resulted in improved yarn and knitting conditions and higher production.

Experiments in maintenance of uniform relative humidity prove there is merit in the atomizer installation. It has been observed that machine production will vary with changes in humidity. Another improved factor observed is that less tension is required on the take-offs.

Extra No. 9

▶Rewinding of knitting yarn has enabled Gurney Mfg. Co., Prattsville, Ala., to improve quality and increase production by:

1) eliminating weak spots in yarn
2) getting cleaner yarn
3) having lower needle breakage
4) giving longer needle life
5) knitting with less tension

This mill sets slub catchers close and increases tension in rewinding. Weak spots show up and break before knitting. The rewound yarn is also cleaner. Therefore there are fewer stoppages in knitting—fewer fabric defects. Although rewinding, an additional operation, costs money, Gurney has found the system economical. In some instances, a knitter can produce 50 lb. more fabric in an 8-hr. shift.

Since most yarn defects never reach the needles, needles break less often and last 2 to 3 times longer than they used to.

Stop-motions and knock-off bars can be set with less tension when running rewound yarn. With this smaller tension there is less chance of damage to the fabric when a slub, knot, or yarn defect does cause the mechanism to trip. Higher quality of fabric is the result.

Gurney has a special method of setting tension of its knitting machines. Tension is adjusted by using a curved piece of wire and a series of weights. The weight then becomes a standard for setting tensions on each machine using the same size of yarn. It has been found that tension for a 28s yarn is about ¼-oz. weight. The weight for other sizes of yarn is varied from this standard.

Extra No. 10

▶Twice each shift all machines at Jaco are thoroughly lubricated with a light, stainless needle oil. Excess oil is wiped away. Sections are closely inspected and lubricated every 90 days. Sections showing excessive lint and oil accumulation are removed and cleaned.

Extra No. 11

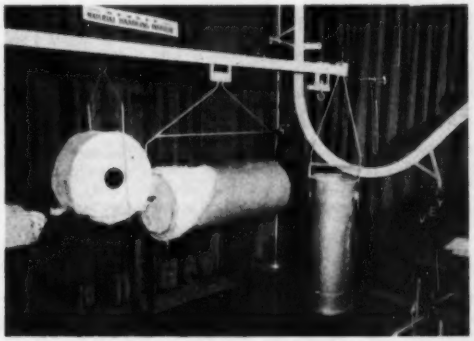
▶Rapid drying-out of oil on Jaco's new Brinton high-speed machines is prevented by lubricating at shutdown in addition to twice each shift. Needles and oilers don't "freeze" now. The oil at shutdown time absorbs heat and prevents hardening of the oil.

A materials-handling show, like materials-handling equipment in general, must be looked at with an eye to what textile mills can really use. Here's a selection of ideas—as made by TW's editors and cameras—applicable in mills. They include:

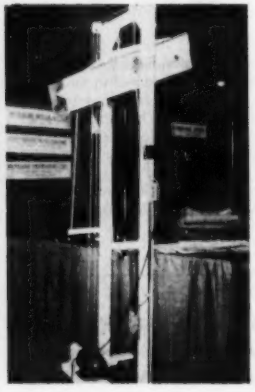
- *New, compact fork trucks that require less aisle space*
- *Fork trucks that need no pallets*
- *A truck that keeps its load at the top at all times*

Ideas for Textile Mills . . . From MATERIALS-HANDLING Show

WHEN THE BOX (of bottles in this case—it could be bobbins) at the top level in the Lowerator truck at left is raised, springs automatically raise the box beneath to the top. This truck, made by Lowerator Div., American Machine & Foundry Co., New York, N. Y., is made in various forms and sizes and could be easily adapted to textile-handling problems. The automatic raising and lowering feature can eliminate stooping over and reaching into trucks to pick up packages.



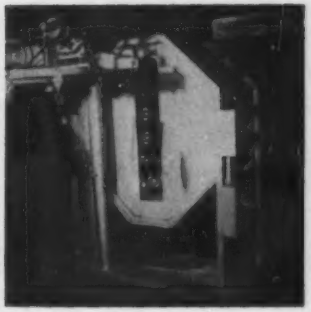
SPECIAL TEXTILE-PACKAGE-handling devices for use with Zig-Zag chain conveyors were shown by Richards-Wilcox Mfg. Co., Aurora, Ill.



UPANOVER PORTABLE HOIST lifts and dumps its load. It could be used in mills for lifting bobbins into winder or stripper or for lifting of starch into cooking tanks. The unit can handle bags, barrels, material in bulk, or other containers, as baskets and trucks. Manufacturer: Jacob House & Sons, 52-54 St. Paul St., Buffalo 8, N. Y.

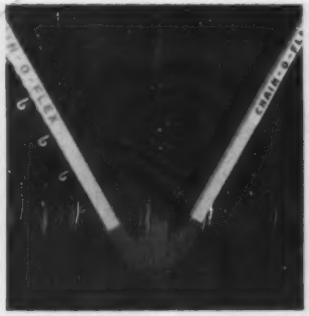
INEXPENSIVE, GOOD LOOKING stand-up desk that could be used in departments by assistant foremen was shown by American Metal Products Co., Burroughs Div., 3002 N. Burdick, Kalamazoo, Mich. The desk is white-enamelled steel, has a hard writing surface and a built-in light—all for $69.50.

BOX LOWERER AND ELEVATOR (shown here built into a conveyor system) could be useful in solving handling problems in multi-story buildings. The unit can be built to most any size and capacity, and is made by Conveyor Specialty Co., Inc., 33 Newport Ave., N. Quincy 71, Mass.



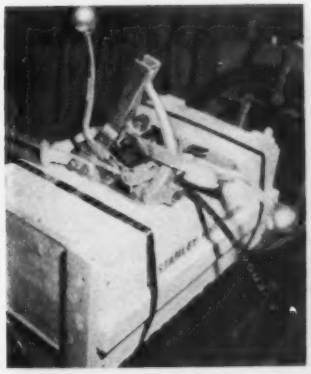
PREHEATING AND DRYING or supplementary drying can be done, with or without a conveyor, by this infra-red oven shown by Triangle Equipment Co., Inc., 45 River Rd., Nutley, N. J. Ovens can be built to almost any size, shape, or capacity and could be used in several places in a textile plant.

STRAPPING UNIT that can be used with a conveyor, can handle most any size box, and that can be raised and lowered easily was shown by Brainerd Stesel Co., Warren, Ohio. Seals are magazined in tensioning, sealing, and strap-cutting head.



LIGHT-DUTY CHAIN CONVEYOR has hooks welded to chain that runs inside casing. Recommended load is up to 30 lb. per hook on 12-in. centers. Conveyor can turn corners, go through rises and falls. It is available from Chain-O-Flex Corp., Franklin Park, Ill.

THIS LOW-COST HYDRAULIC LIFT TRUCK ($236.50) is compact enough to be used (with modified platform) to mount beams in looms. Maximum lift is 52 in., capacity is 750 lb. Maker: Big Joe Mfg. Co., 184 N. Franklin St., Chicago, Ill.

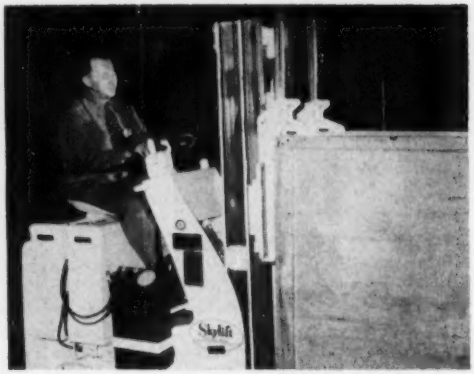


STRAPPING HEAD shown by Steel Strapping Div., Stanley Works, New Britain, Conn., holds seals in magazine. Strap is tensioned, sealed, cut, and held for next operation.

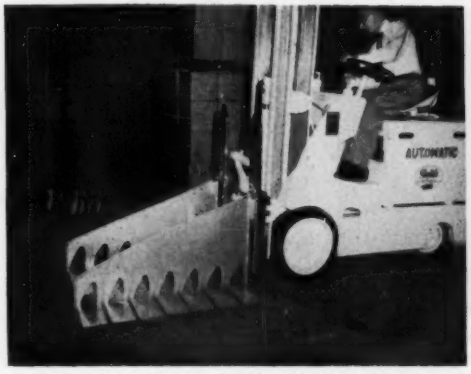
CARGOTAINER collapsible metal containers, already used by some textile mills for inter-mill shipping of yarn, were shown by Pittsburgh Steel Products Co., 1600 Grant Bldg., Pittsburgh 30, Pa. The containers can be handled by fork trucks and can be folded nearly flat for shipping.

10 LB. PER HANGER is the capacity of this light-load monorail conveyor offered by Triangle Equipment Co., 45 River Rd., Nutley, N. J. This conveyor, which can turn on a 7½-in. radius, offers textile mills the chance to handle mechanically their light textile packages without a heavy-duty conveyor.

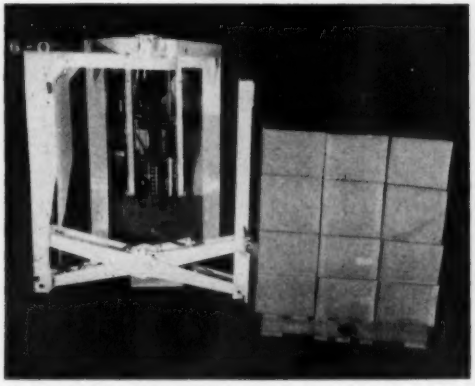
Fork Trucks Are More Compact and Versatile



CONTINUOUS-FILAMENT-YARN BOXES up to 72 in. on longest side can be easily handled and stacked by this forkless attachment that grips the box at the rim. Absence of forks permits use of narrower aisles as there is no need to withdraw forks before turning truck. Maximum lift is 137 in. This device was shown by Automatic Transportation Co., 101 W. 87th St., Chicago, Ill. Note the two-way radio on the side of the truck for radio dispatching.



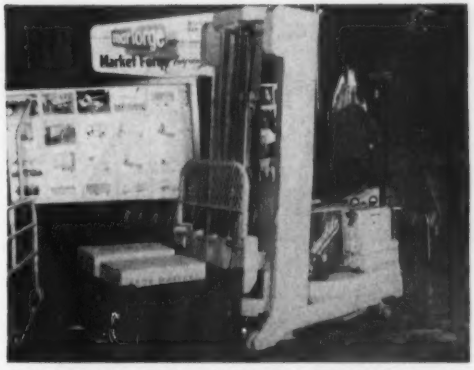
NEW-TYPE COLLAPSIBLE PALLET shown by Automatic Transportation Co. eliminates use of forks, permits trucks to turn more quickly after loading or unloading in narrow aisles. Pallet consists of 1-in.-thick boards inserted into vertical metal "wings." Hooks on truck for lifting pallet are inserted through eyes at top of "wings." Auxiliary forks that fold up and are latched in place by hooks for new-type pallet are provided on the fork truck. A side shifter is also available for positioning loads accurately.



A SIDE-LOADING FORK TRUCK that can operate in 6-ft. aisles was shown by Automatic Transportation Co. The fork can load from either side. Forks can extend up to 54 in. Capacity is 2,500 lb.

½-TON-CAPACITY FORK TRUCK, the Moto-Bug, with a 30-in. lift, was shown by Kwik-Mix Co., Port Washington, Wis. Operator stands on platform at rear of truck.

TREND TO SHORTER FORK TRUCKS is illustrated by these three new models exhibited at the show. Left to right, they are the Spacemaster, available in three sizes from Lewis Shepard Products, Inc., Watertown, Mass.; a truck made by Barrett Cravens Co., 4611 South Western Blvd., Chicago 9, Ill.; and a Spacemaker model shown by Lyon-Raymond Corp., Greene, N. Y. The shorter trucks permit greater maneuverability and use of narrower aisles.



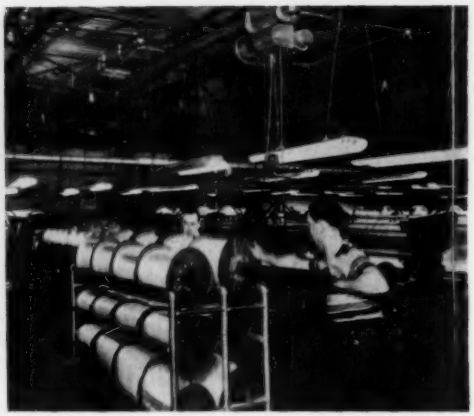
NEW ADDITION to the line of handling equipment of Market Forge Co., Everett, Mass., is this electric-powered 2,000-lb.-capacity lift truck. Features are light weight, compactness (55½ in. long exclusive of forks), and safety devices.

POWERED HAND TRUCKS, available with gasoline-engine or electric power, were shown by Clark Equipment Co., Industrial Truck Div. In this new line of trucks, the motor is completely enclosed and is mounted in the drive wheel.

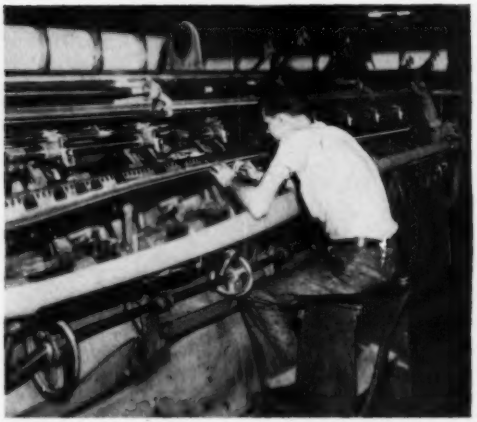
FORK TRUCK of 2,000-lb. capacity shown by Towmotor Corp., Cleveland, Ohio, has been fully redesigned and has many new features, including an extra-heavy frame and automotive-type steering.

HORIZONTAL MOVEMENT of materials is the function of this new Hyster Salsbury turret truck available in several types from Hyster Co., 2902 N. E. Clackamas, Portland, Ore. Motor is 6 h.p., aircooled.

NYLON PIRNS are handled by ends only and are inspected before creeling. Faulty packages are reported to knitting foreman.

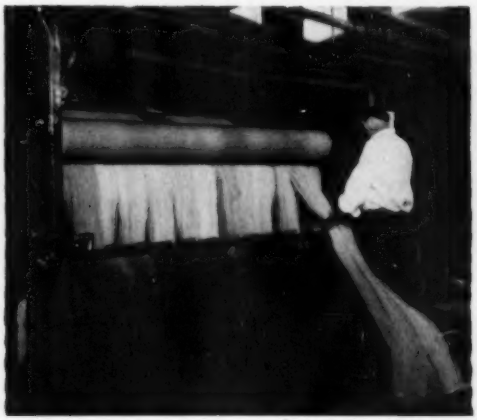


AFTER BEAMING, 16 beams are placed on this truck and carried to knitting room. Monorail lift helps in putting beams into machine.

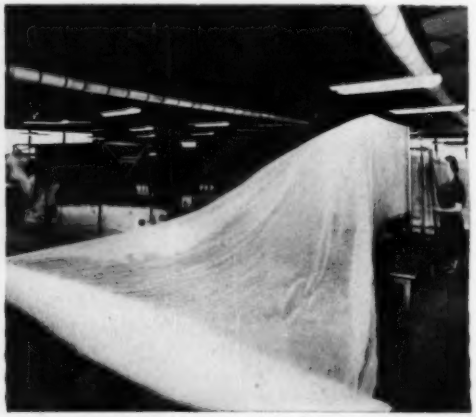


ALIGNMENT OF NEEDLES, sinkers, and guides is done periodically by fixers to reduce needle breakage and fabric streaks.

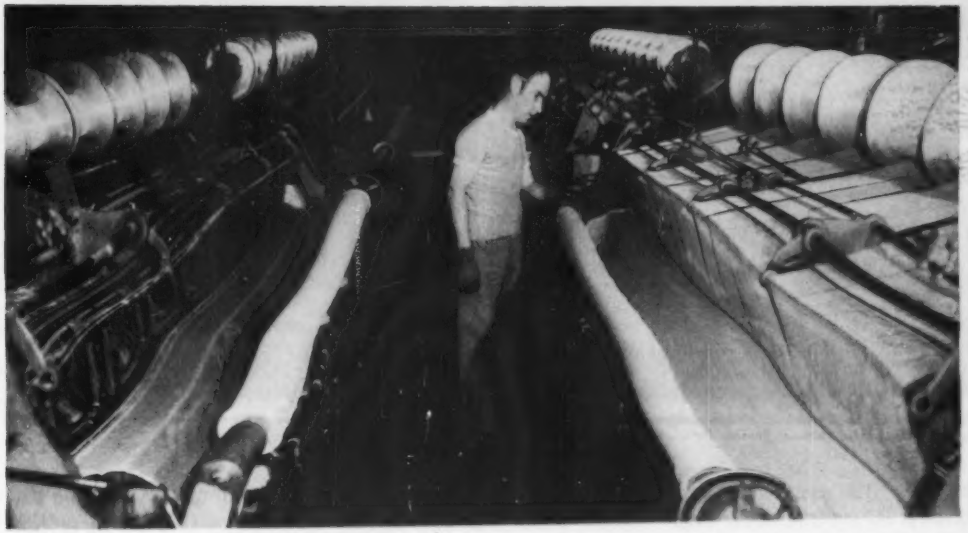
GRAY-GOODS INSPECTION is done in front of fluorescent-lighted frosted glass. Doff truck is lined with plastic sheeting to prevent snags.



INSIDES OF DYE BECKS and dyehouse trucks are polished once a week to help prevent scuff marks and snags in fabric.



TACKING INSPECTION is done by girl on each side of fabric being doubled. Damages are checked against those marked on piece ticket.



MACHINES ARE PATROLLED constantly by knitters in search of imperfections. Knitters wear gloves to assure cleanliness and prevent snags in fabric.

TRICOT QUALITY Is A Habit at Native Laces

Native Laces & Textiles catches defects before they happen by use of checkpoints in all operations. Some of the ideas used are:

- *Store yarn cartons off the floor*
- *Inspect constantly every process*
- *Use an Imagegraph to set machines alike on same fabric style*
- *Use signs to keep workers quality conscious*

To turn out top-quality tricot fabrics consistently, make quality control more than a rule, says top management at Native Laces & Textiles, make it a *habit*. This kind of thinking is used by Native Laces throughout their tricot-knitting operations from the time the yarn is received to the moment it leaves the plant as finished fabric. The formula for their quality success story is this: a system of inspection has been established in all operations, acting as a preventive to catch mistakes, damages, and sources of trouble *before they happen*.

Quality Control Starts When Yarn Comes In

The first important step in this job, reported the firm's production men, was to figure out where danger points existed. Starting with the time that the yarn was first received in the plant, a strict policy of "Handle With Care" was inaugurated. Adequate storage space was assigned to yarns, according to fiber. Cases are stored on wooden platforms 6 in. above the floor to prevent damage by moisture or vermin to cartons. All cases remain closed until taken to the warping room; and when partly used, the cases are re-tied and sealed. Sharp knives or hooks are taboo in this storage room, and trucks and dollies are free from hooks, etc.

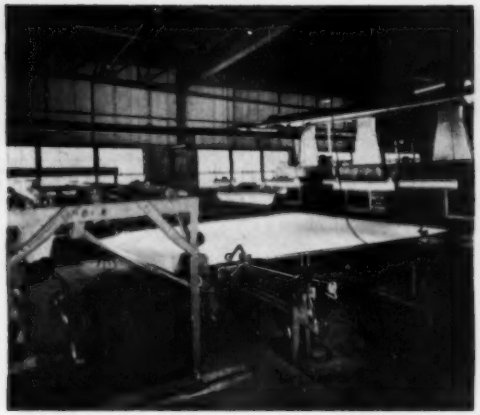
When the yarn is first received, the cases are opened and the yarn is inspected for obvious flaws or damages from transit. In case of trouble, the tricot-room superintendent is notified, and a report is sent to the firm's yarn buyer who reports the situation to the yarn source before the yarn is used. This step is a precaution against second-quality merchandise, as the yarn is ear-marked as a possible troublemaker. The yarn is released to the knitting room when the history of the damage has been ascertained, and if the case can be used, a close check in warping and knitting is ordered.

The second inspection for the cones or pirns of yarn occurs as the yarn is put onto the creel. The warper rotates the pirns and looks for slubs, broken filaments, etc. Again, any trouble is immediately reported to the knitting foreman who is largely responsible for the actual use of the yarn in the plant.

A method of cone handling used by this plant eliminates any contact of the warper's hands with the cone of yarn. The paper covering the cone or pirn is removed after the warper has inserted his finger in the cone tip. Special care is taken so that the yarn lay is not disturbed. This care prevents broken ends in warping.

Patrolling Stops Warping Trouble

A number of checkpoints were established to assure fast, economical warping with a minimum of yarn



SIGNS ARE USED to help keep workers quality conscious. One on the tenter (right) helps prevent speed changes that would cause trouble. One on the setting-chamber housing (left) reminds operator to watch the pinning.

handling. The results are ridge-free beams of uniform density for best knitting performance.

The first checkpoint in the actual warping equipment is a thorough inspection of eyelets, guides, reeds, posts, rods, and all yarn-contact points for rough, cracked, or worn areas. This inspection is made after each shift, and any contact surface that might cause the slightest abrasion is replaced.

On each new run, the creel and warping elements are carefully checked to provide the shortest, most direct yarn route. The key to low, uniform tensions here is a minimum number of contact points for the yarn. Stop-motion units are checked for equalized horizontal alignment as well as efficiency. Eyelets, guides, and tensioning devices are blown with compressed air to keep them free from flaked size. Static-eliminating devices are also checked to prevent any static build-up that could cause splashing on the reed and warp trouble.

During the actual warping, one man is assigned to patrol the creel to look for broken ends or any possible trouble. Another man is at the warper. It is his task to check delivered tensions and keep them at desired levels to insure a good wind and prevent any crushing of spools or deflecting of flanges. When the section spools have been warped, they are immediately covered with paper to prevent soiling or damage to the yarn lay.

Transportation to the knitting room is done on a special truck that Native designed for both storage and transportation. It holds 16 spools in three layers and permits moving without any further handling of the spools. The unit also ties in with an overhead system of material handling by which spools or beams are put onto the knitting machines.

Machines Cleaned Before Each Shift

After the spools have been lifted onto the machines, warp drawers do the necessary threading in and starting up. At this point, the knitter takes over and his job is to patrol the machines, catch any long ends, holes, etc. All machine troubles are immediately reported to the fixers who do the repairing. While the pieces are being knitted, the knitter marks any imperfections arising from knitting or other damages on the piece ticket. This ticket is eventually checked with the record of inspection when the fabric is inspected in the gray.

Minor machine adjustments that in many cases account for damages, turning otherwise first-quality pieces into seconds, are taken care of by the knitters. Other adjustments depend on the knitter's watching the warp sheet for slubs, excess dirt, grease, etc. The knitter also checks the runners and quality. When major machine difficulties arise, as a smash or bar-off, the fixer is notified. Another job of the fixer is to clean the machine after each shift with compressed air. The amount of cleaning depends on the accumulation of flaked sizing; but the rule in this firm's knitting rooms is: All machines are thoroughly cleaned before a shift begins working.

Major machine repairs, such as changing a needle bar, are handled by a special mechanic and supervised by the knitting-room supervisor. The policy at Native is to have a "look-ahead" spare-parts system and a versatile machine shop that can cut pattern wheels as well as turn out a part.

In a typical situation that developed in one of Native's knitting rooms, the knitter noticed that shade marks were developing on a run of 40/13 nylon on only one machine. The fixer was immediately notified, and a quick machine-check revealed that brake slippage was caused by a worn lining, rather than a completely defective brake. The small rubber strip that caused the trouble was replaced in about a half hour, and the machine was started up again.

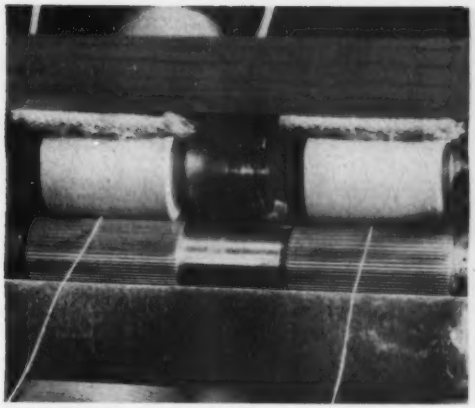
Another job of the fixer is to inspect for any roughness all surfaces over which the yarn will pass. Another safeguard to protect fine-denier nylon fabrics from possible scuffing is to have all operators, inspectors, etc., wear nylon gloves when handling the fabrics. In this way, rough hands, nails, or rings cannot injure any goods.

Machines Set by Imagegraph

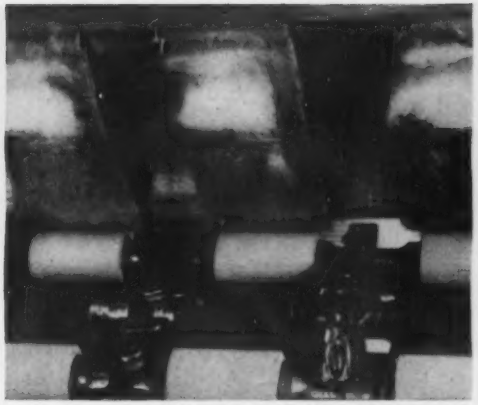
When the same pattern is run on a number of machines, a regular procedure is followed so that all machines will run similarly. An Imagegraph is positioned at the end of the base machine for an end-view image of the knitting elements on the screen. When this device is clamped onto the machine, its longitudinal center line is an extension of the longitudinal center line of the knitting elements and is kept constant throughout the setting. By playing a bright light on the end knitting elements, a shaft image is projected on the screen.

The following points in the stitch cycle are observed around a simple

(*Continued on page* 270)



USE OF COTS that resisted slicking for longer periods than others helped reduce the eyebrowing problem.



THE ROLL SURFACE should exert enough friction on the fibers to carry waste well up into the clearer and prevent eyebrows.

How One Mill Eliminated
CLEARER-WASTE SLUBS

A New England mill eliminated slubs caused by eyebrowing by:

- ***Establishing and enforcing correct clearer-picking methods and regular picking schedules***
- ***Having all clearer picking on driving and roving frames done on the doff or with the frame stopped***
- ***Having all pieces of clearer waste carefully picked from the strand before starting the frame***
- ***Keeping clearers in good condition and with the front edge extending beyond the center of the top roll***
- ***Brushing face of clearer cloth after picking to raise nap, and turning clearer cloth when the part in contact with the roll showed wear***
- ***Selecting the type of top rolls that gave the longest runs without glazing***
- ***Buffing rolls lightly when the surface became glazed and caused excessive eyebrowing***

By E. H. HELLIWELL, *New England Editor, TEXTILE WORLD*

MANAGEMENT OF ONE NEW ENGLAND MILL recently noticed an increase in fabric slubs. These slubs were analyzed and, from the short fiber present and the dark color of the slub, were found to be the result of clearer waste getting into the yarn.

A thorough check was started in the card room to locate the causes of clearer waste getting into the yarn and to apply corrective measures to eliminate or reduce the slubs. Here are the interesting and important facts learned concerning clearer waste:

Pick Clearers Only at the Doff

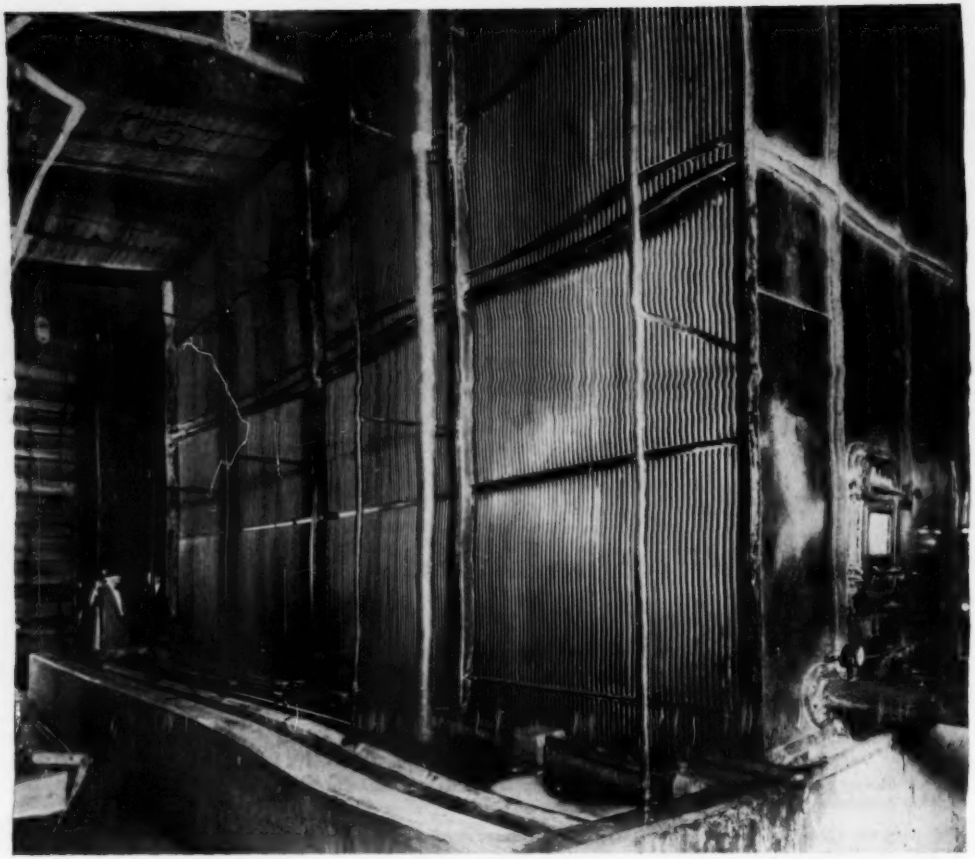
A rule laid down in this (and many other quality mills) is that all clearer picking in the card room shall be done only on the doff or with the frame stopped. This rule, when strictly enforced, does prevent small pieces of clearer waste from being drawn into the work. With the frame stopped, any waste that falls on the stationary strand can be picked off before starting the frame. Draw-frame clearers, a frequent source of clearer-waste slubs, should be picked on the doff made nearest to the expiration of a 2-hr. period. Careless cleaning of drawing-frame roller beams is also a cause of waste in the yarn.

(*Continued on page 176*)

Quality Conference Pays Off

► The investigation into the causes of slubs was initiated at the New England mill concerned as the result of a daily quality-control conference. The conference has been an effective way to reduce cloth imperfections.

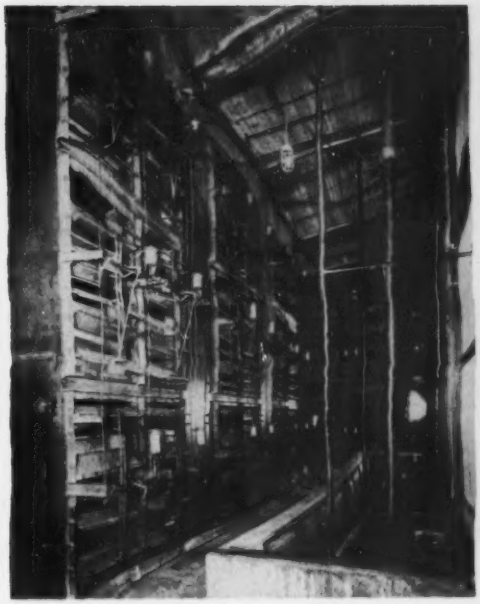
The head of each department is present at the conference held in front of an examining table in the cloth room. Rolls of cloth are selected from the previous day's loom production and run over the table. A score is kept of the number, nature, and probable cause of every imperfection detected in the cloth examined. These selected cloth rolls are considered as typical of the day's production.



AIR WASHER for No. 2 spinning room is 18 ft. high and 30 ft. long and has a capacity of 315,000 cfm. It has two 75-hp. fans and two 1,250-g.p.m. pumps. Air-entrance blades are washed down once a week.

AIR-DISTRIBUTION DUCTS are mounted on the ceiling in No. 2 spinning room. Sufficient fresh, washed air is available at all times for uniformity of relative humidity and temperature throughout the room.

WEAVE-ROOM AIR WASHER and fan can put through 146,000 cfm. of air. Note the enclosed equipment for controlled air flow and recirculation of air from the weave room after the air has been washed free from dust and lint.



FRESH-AIR DAMPER, rising high on the left and automatically controlled by mill needs, is located on the side of one of the two equipment towers that were erected at a cost of about $160,000 each. Air drawn in from outside goes into the washer at the right. Fans draw washed air for distribution through ducts to different production rooms.

WATER STRAINERS, or screens, which catch any lint floating in the wash water, are hosed down at least once each hour during inspection periods.

Central AIR-WASHING Systems Pay Off at Spartan Mills

- *Manufacturing-process relative humidities and temperatures controlled individually*
- *Better quality obtained, as well as more comfortable working conditions*
- *Washed-air freshness is believed a factor in combatting employee work fatigue*

By E. DALTON WHITE
McGraw-Hill Atlanta Bureau

CAREFULLY ENGINEERED and designed central systems of automatic humidity control and evaporative cooling have produced many advantages for Spartan Mills, Spartanburg, S. C. Each system serving a specific process of manufacturing is controlled individually as needed.

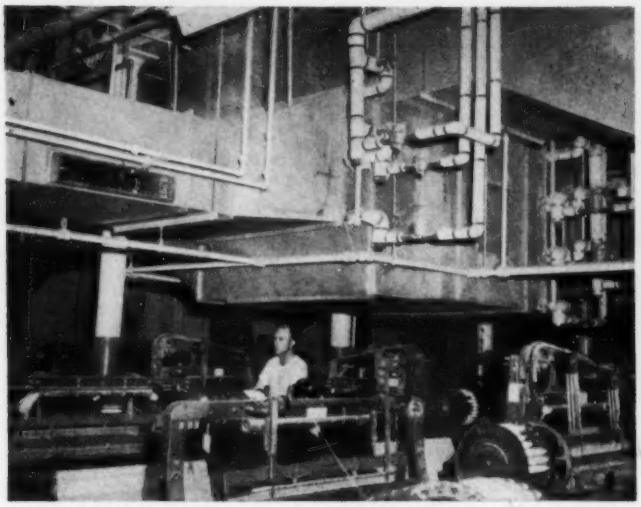
The central systems have provided to a high degree a uniform distribution of temperature and relative humidity. Hot, cold, dry, and wet spots throughout production areas have been eliminated. This improvement has not only made for better control of production and quality, but also for more comfortable working conditions.

There is a notable freshness of air throughout the mill. Fresh air is drawn from the outside and mixed with that from the particular production area before it passes through the water washers for return circulation. Although scientific tests have not been made, the Spartan Mills management believes this freshness of washed air is a factor in combatting work fatigue.

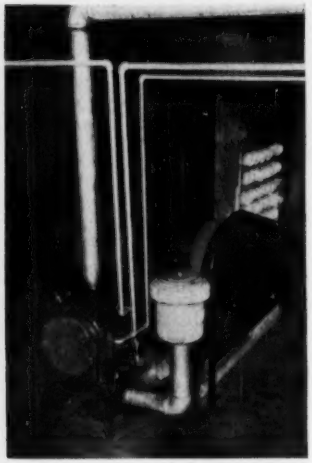
The System Itself

Spartan Mills has two large identical buildings that are called Plants No. 1 and 2. Each is a complete cotton-manufacturing unit, except that the opening and cloth rooms are shared jointly. Plant No. 1 has 39,000 spindles, while Plant No. 2 has 46,000 spindles. Production is on carded broadcloths, class-C sheeting, and similar fabrics.

Rather than devote production areas to air-washing equipment, the mill has constructed tower-like additions about midway the long side of each plant. These towers house the washing equipment, compressors, pumps, and fans. Automatically operated louvers control the amount of fresh outside air added to the mill air going to the washers. The combined



STEAM PIPES attached to weave-room air ducts on cold days insure adequate temperature of washed air and thus an accurate relative-humidity control throughout the working areas. Central steam-control stations are located at convenient terminals.



ATOMIZER-SYSTEM COMPRESSOR is protected on each side by metal guards bolted to the floor. Such safety practices are observed wherever possible around the humidity and evaporative-cooling system.

air is recirculated through the plants.

Each floor has its own central-system unit so that each is independent of the others. An inherent advantage of this method is that a shutdown of any one department does not affect operations in another.

No. 2 Spinning-Room Unit

The largest of the units is installed in the No.-2-plant spinning room. It is equipped with twin 27-hp. fans that have a capacity of 318,000 cu. ft. of air per min. The air washer is 30 ft. long, 18 ft. high, and 8 ft. wide. It is equipped with 1,600 spray nozzles. About 2,500 gal. of water circulate each minute.

Water is supplied by means of two 6-in. feeder lines, one at each end of the unit. Two 5-in. suction lines are used to draw off water as it reaches the bottom of the washer. The water recirculates through the nozzles after it passes through cleaning screens.

Equipment in the two weave rooms is similar, except that only one fan is used for each room. The first-floor weave-room fan has a capacity of 146,000 cu. ft. per min., with water circulation of 1,300 gal. per min. The second-floor weave-room fan has a capacity of 80,000 cfm., and a water circulation of 750 gal. per min.

While the size of equipment thus varies according to total work area and production equipment, temperatures and humidity are controlled to definite standards.

Two 75-hp. fans were found more advantageous for the spinning room than one large one. The two are more economical and also offer better circulation and control of air and moisture. One portion of the room is devoted to filling yarn and the other to warp spinning. While the whole room is maintained at 55% r.h., two fans allow for a variation if it should ever be found necessary.

Additional moisture is obtained in the weave rooms from atomizers located at the air-duct outlets. Steam heating equipment was installed at strategic points in the duct system to raise the air temperature when necessary. Weave-room humidity is maintained at 84%, with over-all temperature set at 82° F.

Bahnson-type controls have been installed at strategic points throughout the working areas for automatic control of humidity. These controls are frequently inspected and cleaned, a regular procedure that is necessary if uniform moisture conditions are to be maintained.

Maintenance of System

While the air systems do not present any difficult maintenance problem, frequent inspection and cleaning schedules of the whole system have been established to insure maximum efficiency in the operation of the equipment. One operator with inspection and cleaning responsibilities is assigned to each shift.

Water-washer screens are inspected every hour, and lint is washed out as needed. Once each week, the entire washer equipment is cleaned. At that time, eliminator blades and other parts are washed down with a hose.

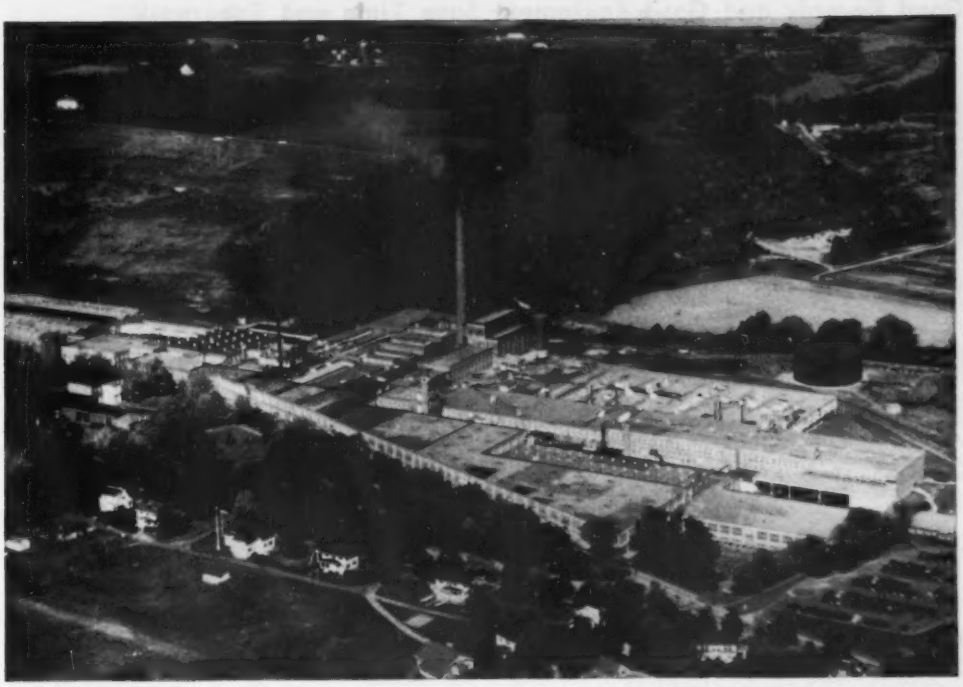
Fans are checked weekly; bearings are lubricated as needed. Motors are checked each shift for vibration, noise, or heat. Any trouble is immediately reported for corrective action.

Before the Bahnson air system was installed, the roofs of the two plants at Spartan Mills were covered with Pittsburgh-Corning "Foamglas" brick and covered with tar and gravel to provide 4 in. of insulation.

All windows were bricked flush with the outside walls. The window-closing procedure consisted of two courses of brick, then two in. of spun-glass insulation, then one course of brick. The window recesses at the inside walls have been used as cabinet space.

Equipment installed in the Bahnson system also includes equipment provided by Buffalo Fan Co. and American Blower Co. So far, in excess of $600,000 has been spent on the over-all job, including the construction of the two towers at a cost of about $100,000 each.

Similar air-washing systems (plus refrigeration) that will maintain a relative humidity of 50% and temperatures from 80 to 85° F. are being installed in the card rooms of both plants. This card-room work is scheduled for completion at the end of the year.



MOUNT HOPE FINISHING CO., celebrating its 50th anniversary this year, gets its water supply from the adjacent Three-Mile River. The mill-village houses surround the plant.

Camera Highlights:

Top-Notch FINISHING PLANT

▶ *TW's Jim Kennedy makes a tour of Mount Hope Finishing Co. and picks up some ideas useful to many mills. Some are:*

- *A 3,000-ft. conveyor that speeds up cloth shipments by 48 hr., cuts floor upkeep.*
- *Centralized and well-maintained personnel files*
- *A spacious cafeteria that helps keep morale at high level*
- *Modern office equipment that speeds up paper work*

PROGRESSIVE AND ENLIGHTENED MANAGEMENT, modern equipment and methods, and a well-maintained plant—that's how Mount Hope Finishing Co. added up to Jim Kennedy, TW's new Southern editor, after his first visit.

The N. Dighton, Mass., plant is celebrating its 50th anniversary this year, and just held one of the biggest "clambakes" New England has ever seen. Over 1,600 employees and guests attended.

Progressive and enlightened management shows up in the wage-and-quality-incentive plan [TW, Jan. '49, p. 98], the meticulously kept employee records, encouragement of employees to broaden their abilities and knowledge, the human-relations policies in general. A spacious and comfortable cafeteria operates at a cash-register loss; but management feels it shows a high, intangible profit in worker morale and fabric production and quality.

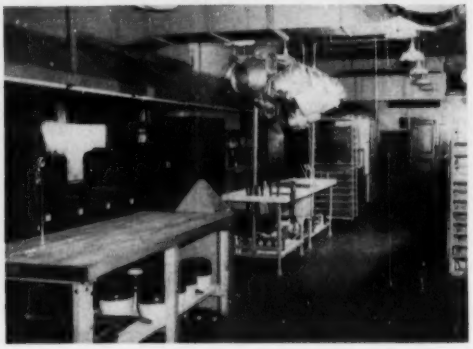
Modern equipment and methods show up in the plant and the offices. A sizeable amount of new dyeing and finishing equipment is being and has been installed to supplement well-kept-up machines, some designed and built by Mount Hope engineers. Modern office equipment has been installed to speed production and help cut overall operating costs. A 3,000-ft. conveyor has speeded handling, reduced the number of heavy trucks, and virtually eliminated floor repairs.

The 28-acre plant is kept spotlessly clean and in top operating condition by a maintenance crew of over 100.

In this camera tour you'll see some of the equipment and methods used at Mount Hope. Many are worth copying, so let's go along with TW's Jim Kennedy on his visit.

Good Records and Good Equipment Save Time and Paperwork

SPACIOUS, spotless, tastefully decorated, and well-lighted cafeteria is a highlight of the plant. To speed up serving, a line starts at each end of the serving table and ends at the cash register in the center. Wallpaper murals line the walls out of sight to the left; floor is maroon tile.

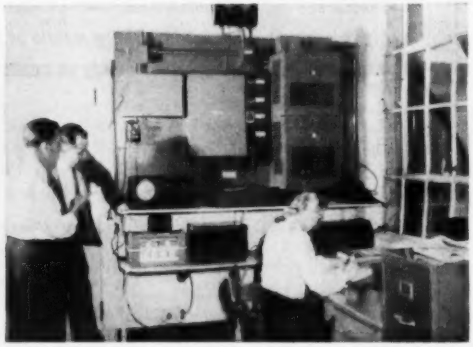


WELL-EQUIPPED KITCHEN is kept spotlessly clean at all times. The cafeteria feeds about 300 on the day shift and serves a 7:30 a.m. breakfast and an 11:00 p.m. meal as well. Large pantry area and walk-in freezer permit accumulation of large stocks of food and purchases in large, economical lots.

CENTRALIZED PRODUCTION office eliminates clerks in individual departments. Centralization permitted reduction of work force from 68 to 40 persons. In one corner, Dan Dunne and Bill Conaty show Jim Kennedy the Multilith equipment used for multiple reproduction of processing, shipping, and accounting forms.

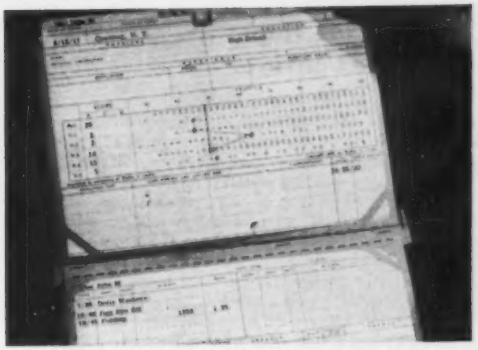
PNEUMATIC TUBES are sent from this master station to departments and other offices by Anne Phillips. Plastic cylinders carry orders, correspondence, etc.; and messengers are eliminated. An unanticipated dividend of the installation has been faster handling of correspondence throughout the plant.

CURRENT FILES of orders, correspondence, etc. are kept in cabinets in background. At end of 9 mos., records are microfilmed. When review is needed, microfilm is projected by viewer being demonstrated to Jim Kennedy by Marilyn McCarthy. About 125 drawers of records can be replaced by one drawer of microfilm.

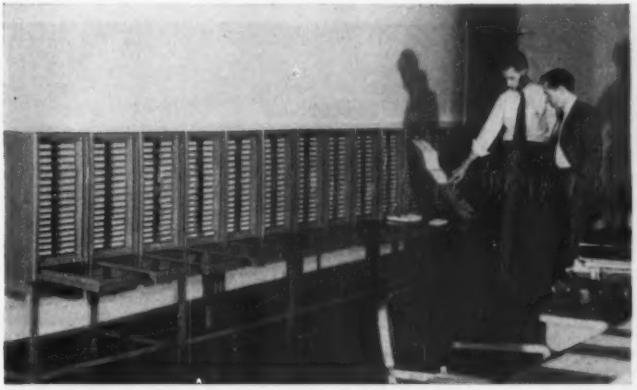


50th ANNIVERSARY CHIMES are broadcast throughout all departments and the community through this control board being described to Jim Kennedy by Harold Shearington, office manager. An FM radio broadcasts news and special events, and a phonograph and a microphone are also available.

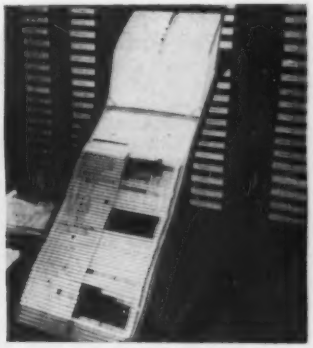
ALL EMPLOYEE RECORDS are concentrated in two files in the superintendent's office. This Kardex file, being shown to TW's Jim Kennedy by Marilyn Bettencourt, contains cards (right) designed by Mount Hope. Another normal-size file folder contains all other data on employee not shown on the Kardex card.



THE SPECIAL CARD, in addition to the normal information on name, date employed, and education, has the employee's Activity Vector Analysis profile, and a record of jobs applied for, work assignments and rates, and absences. Colored signal tabs are used to indicate various facts about the employee.

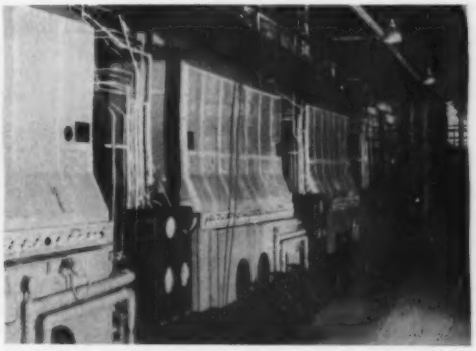


STOCK RECORDS of 13,000 spare parts and supplies, including chemicals, are kept in these Kardex files being shown to Jim Kennedy by Ray Stead, who is in charge of the records.



PLASTIC SIGNAL TABS are used to show instantly the inventory status of parts and supplies. The cards contain a record of receipts and disbursements and the vendor from whom the part was purchased.

BATCHING OF CLOTH on trucks prior to sewing of ends is eliminated. Bales are placed on the floor, opened, and a portable sewing machine brought to the bale. Two girls handle pieces of cloth and sew ends together quickly. Jeannie Trzcinski is the machine operator here. After sewing, cloth is pulled overhead to machines.



NEW POWERHOUSE has three Babcox & Wilcox 50,000-lb.-per-hr. boilers to supplement two 18,000-lb.-per-hr. and four 36,000-lb.-per-hr. Heine boilers. All boilers are oil-fired and are fed from one 1,000,000-gal. tank and one 2,000,000-gal. tank. Total boiler capacity is 230,000 lb. per hr.

3,000-ft. Conveyor Keeps Finished Goods Moving, Eliminates Trucks and

Why Mount Hope Put in the Conveyor

Mount Hope put in its 3,000-ft. conveyor to eliminate congestion in the finished-goods warehouse and shipping dept., and to speed up processing of finished goods. The conveyor was installed by Lamson Corp., Syracuse, N. Y.

The conveyor was first installed in the warehouse. Here, low ceilings had prevented use of power trucks, and goods were brought to the edge of the warehouse area 40 or 50 boxes at a time by trucks. From this point, the goods were hand-trucked to their storage place or to the shipping platform. The tremendous influx of boxes caused a great deal of congestion and confusion, and boxes due to be shipped immediately were frequently held up.

The warehouse had been operated on the principle of doing something to get a box of goods shipped. This principle was reversed, and, with the conveyor, warehousemen now have to do something to keep a box of goods from going out.

With the conveyor, boxes now reach the warehouse-shipping area one at a time, not in bunches. Boxes to be stored can be pulled off the conveyor easily; boxes to go out simply stay on the conveyor and end up on the shipping platform. The conveyor also passes through the low-ceiling areas where trucks could not previously enter; and new, previously unused areas are used for storage.

Later, the conveyor was extended back from the warehouse area through the inspecting, folding, and invoicing areas. Formerly, in these areas, goods were inspected and folded, put in a truck, moved to the next operation, as shading or wrapping, etc. Here the goods were taken out of the truck, put on a table, and put back in the truck or in a carton when the operation was completed.

Timestudies showed that goods stood still for about 40 hr. on trucks waiting to be moved to the next operation. The mill formerly had one room to hold the backlog of goods waiting to be packed. The conveyor has eliminated this room.

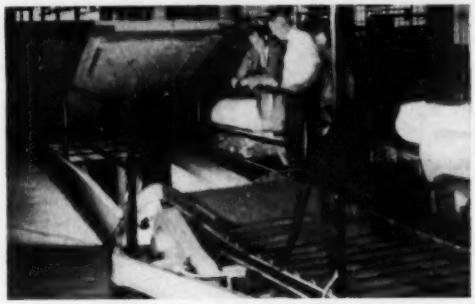
Now, with the conveyor, goods are inspected, folded, shaded, wrapped, etc., on long tables and are dropped into cartons that are then placed on the conveyor. The 40 hr. of standing still has been eliminated, and goods now leave the plant on an average of two days earlier than before. No corners are cut on quality.

The conveyor has also eliminated floor repairs, estimated at $1,500 yearly, and truck-battery-replacement costs. Conveyor maintenance is extremely low—lubrication and an occasional bearing. The first belt, installed in 1939, is still a long way from needing replacement. Total power to run the conveyor is about 15 hp.

We asked Al Carr, Asst. Superintendent, "Did you have to revise the layout of the plant at all when you put in the conveyor?"

"Not at all," he replied. "We did change the direction in which the alleys run—now the alleys run at right angles to the conveyor, whereas formerly they ran lengthwise of the building. This layout enables us to get more goods into the space, incidentally, and, as I say, it enables us to use a lot of areas that we couldn't have used without conveyors.

"We did move the box shop from a location which was about in the center of the plant to the very beginning of the conveyor. That did two things, though. It put the box shop where it ought to be—that is, at the beginning of the operation of the conveyor system—and it did give us one great big area which we took over for cases and cartons and all of our supplies that come into that building. We relocated some of the tables in the wrapping setup—that's true, but we just moved them around—it wasn't a radical change in layout."



1 *"THE CONVEYOR STARTS in the box shop located below an inspecting and folding dept.," Gerald Harrington, head of put-up and packing dept., tells TW Southern Editor Jim Kennedy. Any size of box can be called for by any of eight conveyor-loading stations by sending a slip through pneumatic tube to the box shop. The proper-size box is placed on the conveyor with the box order, which shows station it is designated for, stuck on the side.*

4 *TYPICAL CONVEYOR-FEEDING STATION is described to TW's Jim Kennedy by Milton Babbit, foreman of the packing dept. Cloth is wrapped on tables and placed in boxes on dead-roll feeder conveyor between table ends. Rolls of cloth can be shipped from point to point without being placed in boxes by use of small carboard pallets made by Mount Hope from box scraps.*

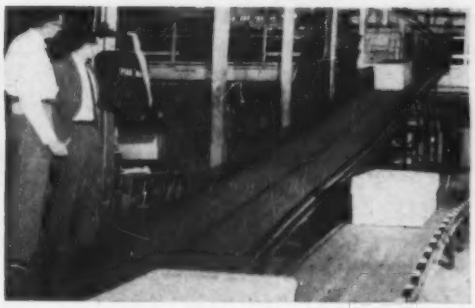
7 *"WE MADE ONE BELT DO TWO JOBS HERE," Al Carr, asst. supt., points out. "The belt carries goods over rollers on the lower floor and goes upstairs to drive conveyor rollers from beneath to carry goods on the upper floor." The belt is tensioned at this point to take up stretch. This section of conveyor was installed in 1939, and the belt is still being used today. It shows negligible wear.*

Congestion in Packing and Warehousing Areas

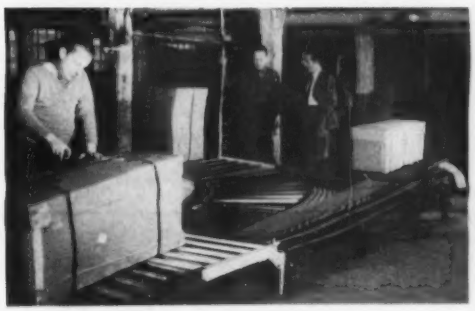
2 AS THE CONVEYOR GOES THROUGH THE PLANT, it follows the north wall closely to permit maximum flexibility in layout of rooms served. Live rollers are used even where gravity rollers could have been used because initial and operating costs were not significantly higher and flexibility of room is preserved. Here, Al Carr, asst. supt. of the plant, shows Jim Kennedy one of the conveyor crossovers that has a stop-start switch on each side.

3 BOXES TURN CORNERS easily by moving onto rollers mounted at a 90° angle. The wheel at the conveyor corner eases the box around the turn. An arm behind the box controls a safety switch that stops previous sections of conveyor if boxes pile up. The conveyor is mounted at a uniform 14-in. height to permit rearrangement of rooms and installation of new loading stations where it is desirable to do so.

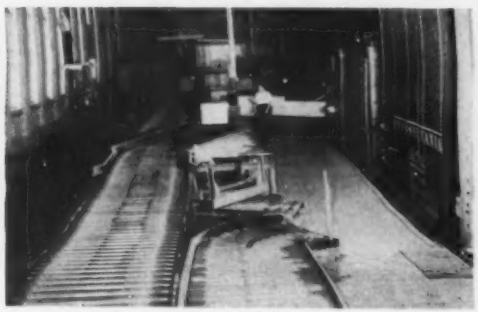
5 "THIS STRAPPING SECTION permits us to strap boxes crosswise and lengthwise while they are on the conveyor," Frank Pimento, expediter, explains to Jim Kennedy. "Strapping units are on counterweighted cables and are pulled down to the box to tighten, fasten, and cut the strapping. Strapping is stored in reels mounted overhead.



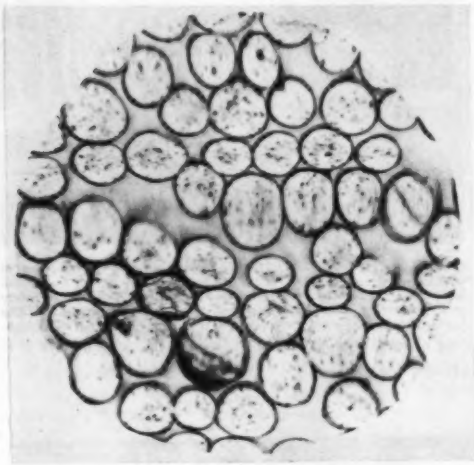
6 SEPARATE BELTS and live-roll conveyors carry goods to and through warehousing areas on low-ceilinged upper and lower floors. Each conveyor continues through the warehouse to the shipping station. "Installation of the conveyor permitted full use of both floors for storage as power trucks could not be used in these low-ceiling areas," explains Frank Pimento, expediter.

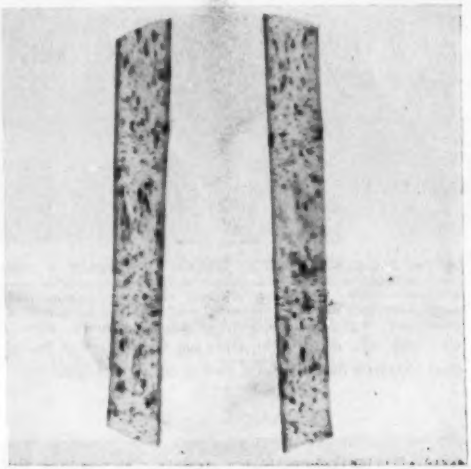


8 "CONVEYORS FROM UPPER AND LOWER FLOORS feed into one here," Levite Carrier, foreman of the shipping dept., explains. "Boxes are stencilled, as John Kudlacik is doing there. A switch directs boxes either to the rail-shipping platform or to the truck-shipping platform." The shipping office is located inside the loop of one conveyor and makes use of otherwise unusable floor space.



9 FOUR ROLLER CONVEYORS branch off into boxcars from the main roller conveyor from the shipping dept. The first layer of boxes in the car is loaded by handtruck; upper layers are stacked to the door by a fork truck that enters the car from the platform on the opposite side. Raymond Smith, foreman of receiving dept., is in the boxcar; Arthur Netto helps with the boxes.





PHOTOMICROGRAPHS (1000X) of Dacron reveal round cross-sectional shape of filaments and smooth longitudinal appearance.

DACRON Data Sheet

- ***Three types being produced experimentally in limited quantities as continuous filament, staple, and tow.***
- ***Tensile strength of industrial type second only to glass and high-tenacity nylon.***
- ***Complete range of shades can be dyed by three methods.***

General Characteristics

The types of Dacron polyester fiber being produced experimentally and the fabrics made from them are generally outstanding in the following characteristics:

Wrinkle resistance (wet or dry)
Recovery from wrinkles (wet or dry)
Shape retention (wet or dry)
Stretch resistance (wet or dry)
Abrasion resistance
Fabric texture and dry handle
Heat resistance
Resistance to weakening by bleaches
Flex life
Quick drying
Strength

Types Produced

Dacron can be made in all fiber forms—continuous-monofilament and multifilament yarns, staple, and tow.

The following counts are being produced in limited quantities:

Continuous Filament

40 den., 34-filament semi-dull apparel yarn—Type 5600
70-den., 34-filament semi-dull apparel yarn—Type 5600
70-den., 34-filament bright industrial yarn—Type 5100
210-den., 34-filament bright industrial yarn—Type 5100

Staple

3-den., 1½- and 2½-in. semi-dull—Type 5400

Tow

3-den., semi-dull—Type 5400

The major difference between fiber types (5600, 5100, and 5400) is their tenacity-elongation relationship.

Tenacity and Elongation

Dacron polyester fiber as currently produced in pilot-plant operations will have approximate tenacity and elongation ranges as listed below.

The tenacity and elongation of Dacron continuous-filament yarns especially suitable for industrial applications are:

Type 5100	Tenacity (g.p.d.) Dry	Tenacity (g.p.d.) Wet	Elongation At Break Dry	Elongation At Break Wet
Straight	6.0 to 6.6	5.8 to 6.4	9.0 to 11.0%	9.0 to 12.0%
Loop	4.6 to 5.1	4.5 to 5.0	5.0 to 5.9%	5.0 to 6.0%

The tenacity and elongation of Dacron continuous-filament yarns especially suitable for apparel applications are:

Type 5600	Tenacity (g.p.d.) Dry	Tenacity (g.p.d.) Wet	Elongation At Break Dry	Elongation At Break Wet
Straight	4.4 to 5.0	4.3 to 4.9	18.0 to 22.0%	18.0 to 23.0%
Loop	4.1 to 4.5	4.0 to 4.4	9.0 to 11.0%	9.0 to 12.0%

Dacron is the trade mark for polyester fiber produced by E. I. duPont de Nemours & Co.

The tenacity and elongation of Dacron staple and tow are:

Type 5400	Tenacity (g.p.d.) Dry	Wet	Elongation At Break Dry	Wet
Straight	3.0 to 3.9	2.9 to 3.8	25.0 to 40.0%	25.0 to 40.0%

Stretch Resistance

Industrial (Type 5100) continuous-filament yarns have extremely high stretch resistance. To stretch the yarn 1.5%, a force of 1.7 g.p.d. must be applied under dry conditions, 1.6 g.p.d. under wet.

The stretch resistance of apparel (Type 5600) continuous-filament yarns is also high. To stretch the yarn 1.5%, a force of 1.4 g.p.d. must be applied under dry conditions, 1.3 g.p.d. under wet.

Resistance To Chemical Degradation

Dacron polyester fiber has excellent resistance to degradation by bleaches and common solvents, and its general resistance to chemicals is good.

Degradation Resistance	
Weak mineral acid, room temperature	Excellent
Weak mineral acid, boiling	Good
Strong mineral acid, room temperature	Good
Strong mineral acid, boiling	Decomposes
Weak alkali, room temperature	Good
Weak alkali, boiling	Poor
Strong alkali, room temperature	Fair
Strong alkali, boiling	Dissolves

Resistance to Heat and Flammability

Dacron has remarkable heat resistance. High temperatures cause little discoloration or degradation. A fabric kept for 30 days at 300° F. in a hot-air oven retained 74% of its original tenacity.

Dacron has a sticking temperature of 460° F., and it will melt at 480° F.

Dacron by itself burns slowly, but will not flash burn.

Toxicological Properties

Dacron is physiologically inert. Tests have revealed no poisonous or other harmful effects when used internally. Applied externally, there is no evidence of irritation or skin reaction. As with all other fibers, the addition of other materials to Dacron may create a health hazard; therefore, finished fabrics should always be checked for dermatitis and toxicological reactions.

Moisture Absorption

Dacron polyester fiber has a moisture regain of 0.4% at 60% r.h. and 70° F. Generally, fabrics made from it are quick drying, the extent depending on construction and whether continuous-filament or spun yarns are used. Even fabrics from spun yarns dry relatively fast when the excess water is removed by wringing or spin drying.

Further Facts About Dacron

Good sunlight resistance in general, excellent behind glass.

Excellent electrical-insulating properties.

Freedom from damage by insects or micro-organisms.

Density: 1.38.

Yarn shrinkage in boiling water ranges from 5% to 11% depending on yarn type.

Excellent adhesion to natural and synthetic rubber can be obtained. Fabrics from Dacron are subjected to accumulation of static electricity. Antistatic agents are recommended where this property is objectionable.

Washable, or cleanable with standard dry-cleaning fluids. Ironing and pressing temperatures should be approximately the same as those used for rayon (275° F.).

Continuous-filament Dacron is capable of 15 to 20% shrinkage in finishing. Fabrics with very little porosity can be produced if desired.

Heat-Setting and Dimensional Stability

Fabrics made of continuous-filament Dacron can be heat-set on substantially the same equipment and with the same techniques that are used for nylon. Setting at temperatures in the range of 350° to 425° F. on a hot roll has resulted in fabrics that are dimensionally stable to repeated washing and ironing.

Generally speaking, fabrics made of Dacron staple are effectively stabilized in normal dyeing and finishing operations.

Shape and Crease Retention

Stabilized fabrics made of continuous-filament Dacron, and also those made of staple, have excellent wrinkle resistance and recovery from wrinkling. Essentially permanent creases can be pressed into them at ordinary ironing temperatures (about 275° F.), and remain sharp even after the fabric is washed. Such creases, however, can be ironed out if desired.

Suits made of Dacron staple have held their shape and press in abnormally damp weather and even when wet.

Dyeing Properties

Dacron polyester fiber can be dyed to a complete range of shades with good to excellent wash fastness and fair to good light fastness. Dispersed acetate dyes have been successfully applied to this new fiber on a large scale from an aqueous bath.

Three dyeing methods are currently used:

1. Aqueous dyeing with carrier. This method has been especially satisfactory for dyeing suiting fabrics on a beck. Filament fabrics, sewing thread, filament and staple yarns, raw stock, and top have also been dyed successfully with benzoic acid as the carrier.
2. Pressure dyeing without carrier. Pressure dyeing of sewing thread, yarns and raw stock has been accomplished in machines adapted to operate under 15 lb. pressure at 250° F.
3. The Thermosol process has been successfully demonstrated in small mill-scale operations. Acetate dyes are recommended for application by this method and can be used either alone or combined with selected vat color pigments.

   The Thermosol process consists of padding the color, drying and then heating the fabric for a short time at a high temperature, such as 440° F. in a hot-air flue-type dryer.

COMPLETE SCOURABILITY and the superior adhesiveness of Sunotex Machine Oil ended a jinx for this felt maker. Sunotex held spotting to the absolute minimum and replaced an "adhesive" oil which had to be applied three times as often. Sunotex Machine Oil is now used—with never a trace of harmful staining—on every loom in the mill, including this 500-incher.

LUBRICATION JINX IN 3 MILLS ENDED BY SUNOTEX MACHINE OIL

One mill had been plagued with excessive oil costs, another with numerous spots that would not scour out, a third with rusting. By switching to Sunotex Machine Oil, a new general-purpose textile oil for bearings, cams, slides and gears, each one of these mills ended its troubles.

Sunotex Machine Oil is an ideal lubricant for almost all friction points of textile equipment. It is exceptionally adhesive, scours out completely from all fabrics, assures absolute rust protection, withstands extreme pressures, simplifies inventories, makes possible longer undyed fabric storage.

To find out how many of your machines this oil can protect, write to Department TW-7 for lubrication data sheets and samples.

NO RUST forms to interfere with the delicately adjusted mechanisms of this hosiery machine now that Sunotex lubricates it. The mill's production of perfect nylons, greatly reduced by the oils formerly used, has returned to rated capacity.

50% LESS OIL is needed to lubricate this knitting machine because Sunotex adheres so much better. Unlike the former product, this Sun oil does not gum up the system. Costly week-end clean-ups have been eliminated.

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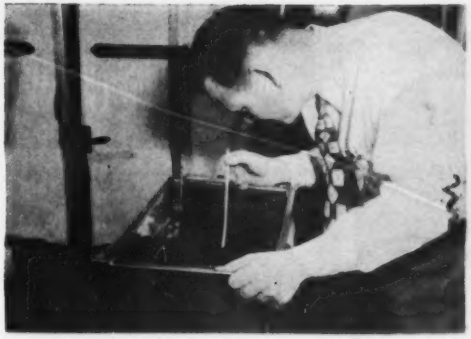
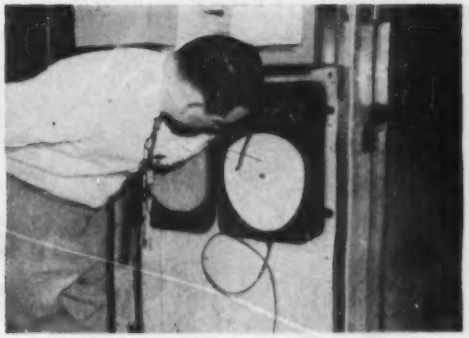


SOAKING-BATH TEMPERATURE *should be the same for each batch of yarn. Temperatures will vary with different situations; but once a standard is set, it should be maintained. Many mills use a sample unit to determine best formulas, times, and temperatures. The author, Mr. Hamby, is shown as he checks the temperature of a sample batch.*



ADJUST DRYING TEMPERATURE *and set cycle to retain about 5 to 7% moisture in the cakes. Mr. Hamby is shown as he makes a temperature adjustment on a test run. Uniformity of drying is critical because if part of a cake retains excessive moisture, you may get stretched yarn, and shiners may result.*

Nine Keys to Good THROWING Efficiency and Quality

Here are nine pointers for increasing quality and efficiency of throwing.

These pointers cover all phases of throwing—soaking, extracting, drying, winding, uptwisting, doubling, package handling, and maintenance.

By DAME S. HAMBY

Assistant Professor, School of Textiles, N. C. State College

1. Soaking: Proper Formula and Constant Soaking Time and Temperature Necessary

The proper control of soaking-bath concentration and temperature is important to both quality and efficiency in a throwing mill. The chief components of the bath, oil and gelatine, are both major factors in controlling pebble in the finished fabric. Unless each bath is mixed to exactly the correct proportions, considerable variation in finished-fabric quality will result.

The concentration of gelatine and oil in a soaking bath varies with the type of fabric, type and denier of yarns, number of filaments, etc. However, a typical formula would have approximately the following proportions: 50 gal. of water, 11 lb. of oil, 4 lb. of gelatine, 2 to 4 oz. of tint.

The temperature of the bath is rather critical even though not all mills use the same temperature. However, the normal range of temperatures during soaking is between 130° and 145° F. The temperature chosen depends upon the particular situation and may be set to satisfy a given set of conditions. But, once the temperature has been established, it is important that it be maintained and that each batch be soaked at the same temperature.

The number of pounds of yarn that can be soaked in any one bath should be determined and kept constant. Otherwise, considerable variation in oil and size pickup will result, and this condition in turn will cause varying degrees of pebble in the finished fabric.

All formulas, temperatures, times, etc. included in this article are quoted from *Textile Processing, Continuous-Filament Yarns*, by Grover and Hamby, copyright 1949, published by The Technical Press, Raleigh, N. C.

2. Extracting: Exact Extracting Times and Proper Handling Are Essential

Extracting of cakes is one of the simplest operations in a throwing plant, and yet it can be a source of trouble that will greatly reduce efficiency and quality in subsequent operations.

If the length of time that cakes are allowed to extract is not controlled very rigidly, each load will have a different concentration of gelatine and oil when it is taken from the extractor. This variation, of course, will also produce a fabric with varying degrees of pebble.

An automatic timer and brakes help assure uniform extraction by maintaining control over extracting times.

The cakes should be placed in the extractor immediately after the soaking period is completed and extracted until they retain between 90 and 100% of their original weight in soaking solution. For example, a 1-lb. cake should weigh approximately 1.9 or 2 lb. after extraction.

The efficiency of the winding operation depends to a great extent upon proper handling of the cakes during and immediately following extraction.

There has been considerable controversy throughout the throwing trade

(*Advertisement*)

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Starch for invisible clothing

Now you see it; now you don't. Put camouflaged clothing on a fighting man. Place him in a thicket. He disappears. How is cloth camouflaged? With a starch product! Mixed with dyestuffs, as a thickener, it helps to print intricate patterns with razor-sharp detail. Nature-true colors. And deep penetration that resists fading. Starch is versatile! It prints everything from tough military cottons to fashionable gossamer sheers.

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NON-CONGEALING QUICKER RINSABILITY

You asked for a starch with exceptional running qualities. For sizing spun rayon yarns. It's ready. NU-FILM is a new type of starch. Non-congealing. Won't jell in size box or feed line. Offers additional advantages never before combined in a single starch:

NU-FILM practically eliminates hard size . . . retards the formation of set marks . . . and reduces rayon 'seconds'. You can count on improved weaving efficiency soon after applying NU-FILM to your slashing operation.

NU-FILM is removed from woven fabrics quickly and easily. Under actual field conditions in dyeing and finishing plants, it has evidenced better rinsability than any other type of starch product.

Due to its smooth film-forming properties, NU-FILM produces grey fabrics with better 'closed-in' appearance and 'hand.' It's prepared in a matter of minutes, as this typical formula indicates:

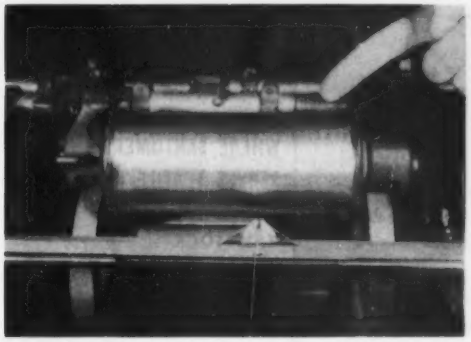
85 lbs. NU-FILM
2 lbs. Mill Wax

Bulk to 100 Gallons

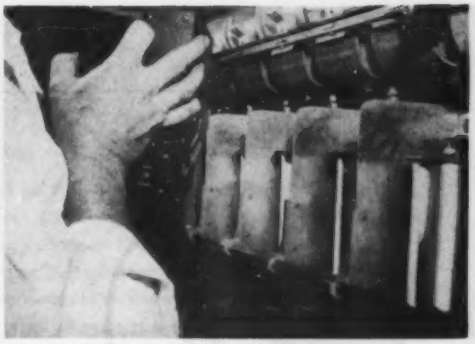
Raise temperature to a boil and hold for 20-30 minutes. Apply in the usual manner.

Sizing Filament Viscose yarns? Here again, NU-FILM excels as a replacement for gelatin.

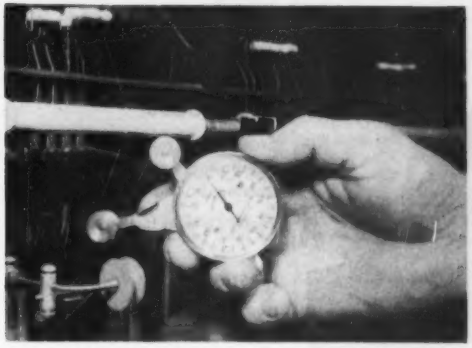
NU-FILM laboratory samples will be sent without charge. A trial run supply will be shipped at quantity rate. NATIONAL STARCH PRODUCTS, 270 Madison Avenue, New York 16, N. Y.



GOOD PACKAGE FORMATION is a must in winding. An improperly adjusted traverse, as shown above, will cause rolled and trapped ends. These ends will, in turn, cause excessive breaks during winding.



UNIFORM SPINDLE SPEEDS are required for even twist. You can use some type of stroboscope, such as this Strobotac, to check speeds quickly. A machine can be checked in a matter of minutes.



TENSIONS MUST BE ADJUSTED if winding speeds are changed. An increase in winding speed will cause an increase in tension if no adjustments are made. Control of tension is equally important in winding and twisting.

HANDLE ALL PACKAGES by the flanges, arbors, or cones. Careless handling of packages will result in broken filaments, bruised yarn, and dirty or greasy yarn. Pin or yarn boards and racks to keep the boards separated should be used.

as to the best position of the cake in the basket type of extractor. Some throwsters place the side of the cake against the side of the basket, and others place the base of the cake against the side of the basket. The industry seems about evenly divided as to which method should be used. Regardless of which method is used in any particular mill, the requirements for good extracting remain the same. The cake should be extracted to the proper weight, the wind should not be disturbed, and the cake should not be so distorted that it cannot be shaped by hand to give good winding efficiency after drying.

Considerable work has been done with individual-bucket extractors, and eventually they will probably replace the basket type. This type of extractor offers more uniform extraction and less cake distortion.

3. Drying: Adequate Drying Cycle and Properly Controlled Temperatures Necessary

Uniform drying throughout the cake and properly controlled temperatures during the drying cycle are necessary for good quality and efficiency. If the cake is not dried uniformly, certain sections, usually the middle, will retain an excessive amount of moisture, and stretched yarn during winding will result. Yarn stretched beyond its elastic limit during winding will not completely recover and will form shiners in the finished fabric. Since the elastic limit of yarn is lowered by the presence of excess moisture and the yarn is more susceptible to stretching, it is necessary that the yarn be dried uniformly throughout the cake.

The drying of the cake, however, should not be carried to the point where all moisture has been removed. Approximately 5 to 7% moisture should be allowed to remain in the yarn. This moisture will prevent damage to yarn and size that would result if it were dried to oven-dry conditions.

Be sure that you have uniform air circulation during drying and try to eliminate dead air pockets in the tunnel. Improper control of the air may cause cakes from the same rack to have different amounts of moisture and no control can be maintained over them.

The temperatures normally used for drying range from 160° to 170° F. with the entering end of the tunnel at a somewhat lower temperature, usually 125° to 140° F. The entering end of the tunnel is usually held at the lower temperatures to prevent "wicking" or migration of the soaking ingredients.

(*Continued on page 180*)

Efficient Detergent for Cotton Piece Goods

Whatever your method of dyeing and finishing cotton piece goods, there are numerous places where Monsanto Santomerse No. 1, the all-purpose detergent and wetting agent, can serve you efficiently. It aids in giving fabrics a good bottom, assists in level dyeing. It reduces crocking and prevents insoluble metallic curds which cause spotting.

Among the varied uses of versatile Santomerse No. 1 are scouring after singeing . . . in the souring bath . . . in J boxes . . . in jigs . . . in scouring after kiering, bleaching, printing or acid aging . . . in high-speed continuous units.

Santomerse No. 1 is an alkyl aryl sulfonate, with a minimum of 40% active ingredient. It is a highly efficient detergent, wetter and penetrant. It holds particles of soil and unattached dyestuffs in suspension so they are whisked away in the rinse. Santomerse No. 1 is efficient in hard or soft water . . . in hot or cold solutions . . . in acid or alkaline baths. Santomerse No. 1 is an anionic detergent and prevents the formation of insoluble metallic curds in hard water.

For information on the use of Santomerse No. 1 in any textile operation requiring a detergent or wetter, contact the nearest Monsanto Sales Office or write MONSANTO CHEMICAL COMPANY, Phosphate Division, 1700 South Second Street, St. Louis 4, Missouri.

WHERE SANTOMERSE No. 1 SERVES TEXTILE INDUSTRY

RAWSTOCK

Cotton: Kier boiling, scouring, bleaching, dyeing.

Wool: Carbonizing, dyeing.

YARN

Cotton and Synthetic Fibers: Wetting out, dyeing, bleaching, scouring.

Wool: Carbonizing, scouring, dyeing.

PIECE GOODS

Cotton and Synthetic Fibers: Kier boiling, enzyme desizing, scouring, boiling off, bleaching.

Wool: Dyeing, scouring.

HOSIERY

Dyeing, scouring, bleaching, after treatment.

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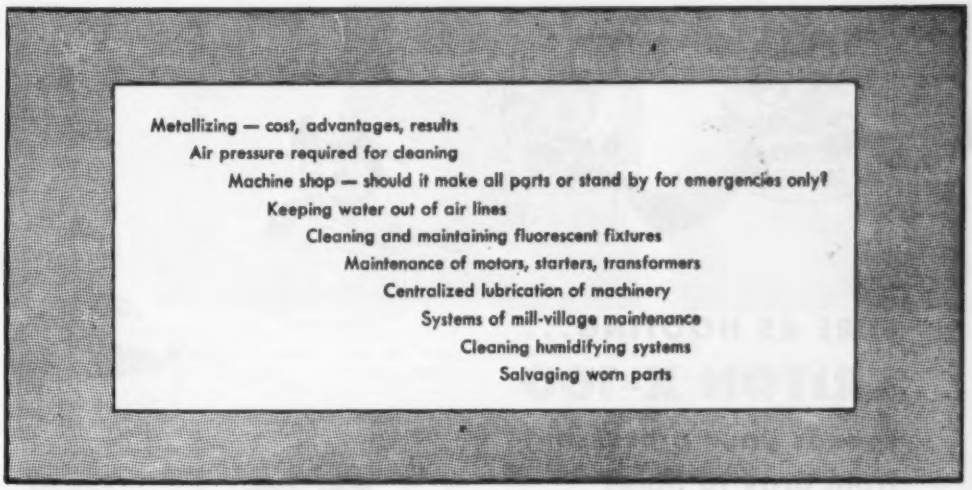
Metallizing — cost, advantages, results
Air pressure required for cleaning
Machine shop — should it make all parts or stand by for emergencies only?
Keeping water out of air lines
Cleaning and maintaining fluorescent fixtures
Maintenance of motors, starters, transformers
Centralized lubrication of machinery
Systems of mill-village maintenance
Cleaning humidifying systems
Salvaging worn parts

MILL MAINTENANCE Spotlighted By Alabama Executives

INTENSE INTEREST WAS SHOWN in the first meeting of the maintenance section, Alabama Operating Executives held recently at the Chamber of Commerce in Birmingham. Answers to many questions submitted by the mills participating are condensed here.

Cost of Metallizing

Question: Discuss cost, advantages, and results of metallizing equipment.

More mills are metallizing and experience has been varied, but results are satisfactory both in saving money and in restoring worn machine parts to service quickly. Mills build up worn motor shafts from cards, feed-roll journals, sand rolls from looms. Other parts metallized included card calender rolls; drawing calender rolls; card feed rolls; squeeze rollers on slashers; compressor, crank, and other shafts; gears, and similar items.

One mill estimated the cost of metallizing worn shafts at approximately 75% of welding. In the case of sand rolls, one mill estimated its metallizing investment will be paid for in about one year from the cloth saved.

One mill estimated the cost of metallizing, including cleaning and preparing rolls, at about 0.085¢ per lineal inch, including one coat of 0.80 carbon steel and one coat of No. 2 stainless steel. Another mill said it reclaimed rolls at 30 to 35% of the cost of a new part. One mill said it paid for its metallizing equipment in repairing a scored crankshaft on a 17x17 duplex compressor.

Air Pressure in Cleaning

Question: What air pressure do you maintain for cleaning?

One mill reported that pressure is maintained at from 75 to 80 lb. at the compressor room with some lines running up to 750 ft. General-cleaning pressure is about 50 lb., but more compressors are being installed to get 100 lb. Pressures up to 150 lb. would be satisfactory.

Another mill used 80 lb. for blowing off frames and general purposes,

---

Officers— Protective Coatings— Basis of Machine-Shop Operation—

Wilson Patterson, superintendent of Tallassee Mills, was elected general chairman, succeeding Robert Horsley, cotton mill manager of Pepperell Manufacturing Co. Henry L. Lanier, general superintendent of Cowikee Mills, was named assistant general chairman.

S. W. Quisenberry, national manager, maintenance sales, E. I. du Pont de Nemours Co., Wilmington, Del., presented a discussion of the importance of protective coatings in mill and village maintenance. He stressed that there is no wonder product that will serve all needs.

Good performance of protective coatings requires adequate surface preparation, careful selection of the right type of material, proper application, and adequate film thickness. Best and most economical results are obtained in repainting when the old coat is still sound and requires little surface preparation. Primer coats are important in surface treatment.

Emmett Warren, vice-president, Avondale Mills, led the program discussions. He pointed out that as the mechanization of the industry increases, so must management increasingly depend upon the mechanical knowledge and skill of the mechanical staff for efficient mill operations. He declared that cost of operating a machine shop should not be considered in terms of individual items produced but in terms of keeping productive equipment in operation and lowering the cost and improving quality of the end product. He said that mill management should make this fact its first consideration in the operation of a machine shop.

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speeds your processing from gray to finish

Makes water wetter —so it penetrates better

TRITON X-100 is a concentrated 100% active penetrant and detergent, non-ionic, and alkali-and-acid stable. As a scouring agent for wool, cotton and synthetic fibres, it is a fast wetter, an excellent detergent and an outstanding emulsifier for oil and grease. And in dyeing and finishing too, it speeds processing and cuts costs. Be wise and thrifty. Send for full details of TRITON X-100 today.

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GENERAL CHAIRMAN of the meeting was R. B. Horsley (right), shown with Emmett Warren, who conducted the discussion.

BEN CRAWFORD, association treasurer, left, talks with Wilson Patterson, vice-chairman, between meetings.

PAPER ON MAINTENANCE was given by S. W. Quisenberry, E. I. du Pont de Nemours & Co., Wilmington, Del.

and 40 lb. in conjunction with humidifying system where atomizers are used.

Opinion and practice was that cleaning needs should be broken down so the pressure will do the toughest job. Pressure in weave rooms up to 80 lb. is needed to do a good job, and up to 60 lb. in card and spinning rooms. Higher pressure is required with high humidity.

The best type of nozzle for cleaning is ⅜ in. with a ½-in. hose and 60 lb. pressure in weave room. Another mill uses a ⅜-in. nozzle at 85 lb. pressure, while others reported using a ¼-in. opening.

Keeping Water Out of Air Lines

Question: What is the best and most economical way to keep water and oil out of air lines?

A satisfactory and practical method is installation of an after-cooler and separator between the compressor and air receiver. Installation of a trap at the separator will keep the separator drained, and very little little oil and water will be carried over to air receiver. The receiver can be blown manually.. Supply lines should run upgrade and traps installed at a low point on headers. Filters will help.

One mill uses baffle or cyclone-type separators between the after-cooler and receiver. Poro-stone filters are used by several mills. Others reported that the automatic lubricator on the compressor should be checked to insure against too much oil being discharged. Traps on separators do a good job.

Machine-Shop Operation

Question: From a money-saving standpoint, which is best for a textile machine shop: to keep a maximum amount of labor and make practically all gears, shafts, and studs for the general-supply department, or to maintain a minimum amount of labor for emergency and maintenance work?

One mill reported, "We figure that our machine shop, by keeping a maximum amount of labor for general repairs and making all gears, shafts, and studs, pays dividends."

Another mill stated, "We maintain a minimum amount of labor and buy everything we can get cheaper than we can make it. We make studs and most gears and shafts for general mill use."

Opinion of other mills varied depending upon size of mill and amount of equipment in the machine shop. Adequate automatic equipment and a production schedule for stock items was considered advisable. Machine-shop personnel can be used profitably for general mill maintenance. During times of critical shortages of parts, the shop is essential. The size of the shop force depends on the size of the mill and allocation of maintenance and repair responsibilities.

Maintaining Fluorescent Fixtures

Question: Outline your system of cleaning and maintaining fluorescent fixtures.

One mill changed from having each department clean fixtures and replace tubes to a centralized-maintenance system. Maintenance was made the responsibility of the electrical department with good results. The job is done on a planned schedule so that the crew washes fixtures and replaces tubes when the footcandle reading drops below the minimum standard. Work is on a continuous cycle.

Some mills leave the responsibility to each department, while others make cleaning and repair the duty of the electrical department. Fixture-cleaning periods ranged from weekly to when needed. Fixtures are thoroughly washed once every 6 mos. to annually. Some mills do a full job when needed.

One mill has each reflector washed with water and a cleaning agent once each 6 mos. Lamps are replaced when burned out. One mill reported that after cleaning the footcandle reading showed increase of 30% in illumination.

Another mill uses a vat on wheels to clean fixtures with soap and water. Fixtures are relamped once a month by a three-man crew. Soap and water was considered better than ammonia and water.

Most mills reported no experience with slimline fluorescent fixtures. The length was considered impractical. One mill reported a trial installation, but more engineering is needed.

Maintaining Motors, Starters, Transformers

Question: Give experience on maintenance of motors, starters and transformers.

There was general recognition of the necessity of motor inspection and maintenance, but some variation in systems and schedule time.

One mill reported that motors were cleaned and oiled once each week. Ball-bearing motors are cleaned every 3 mos. A record is kept, the same personnel look after the same motors, and a better job is done. Self-cleaning lint-free-type motors are cleaned once every 4 to 6 weeks and spinning-room motors twice each week. Motors equipped with lint screens are dismantled and cleaned once every 4 to 6 mos. All motors are given a general overhaul every two to four years, depending on size and severity of service. Air-gap gauges are used every 6 mos. to determine wear on large motors.

(*Continued on page 189*)

For perfect Teamwork

Follow-thru

with ORANGE LINE LOOM LEATHERS

Here are three members of the big team *in action!* ... for this photograph was taken at 1/20,000th of a second while the loom was doing 175 picks per minute!

It's one picture in a series of amazing "stop action" photographs showing how G&K Textile Leathers *follow-thru* to prevent shuttle bounce, cut shuttle cost, stop kinky filling ... Here's proof that you can *follow-thru with leather* for better output, less down-time, bigger profits. Start with the *Big Three* in the famous G&K Orange Line:

First, *the famous PICKMASTER picker,* precision-built of special Hairitan® Leather – the only material that can withstand the repeated blows of the shuttle spur without causing shuttle bounce or getting over-heated. Shuttle bounce causes kinky filling, and over-heated spurs cause trouble.

Second, *the famous BOXMASTER Hairitan Leathers.* Again a special Hairitan Leather that maintains the original dense, high-friction surface as it wears. No coarse fibres to catch filament rayon – no rough surface spots to interfere with the smooth boxing of the shuttle. You can adjust your boxes and forget them when you cover with BOXMASTER Leathers.

Third, *the famous Hairitan Check Strap,* hair-on or hair-off, straight or endless types. These are built to *flex* and *flow* twice a second, month after month to cushion the picker stick without wearing on the edges. Only leather can stand up in this tough service – and G&K Check Straps of Hairitan Leather are proving that a good check strap is a Loom Fixer's delight!

Follow-thru with leather for better, more profitable loom hours. And look to Graton & Knight *and its southern affiliate, Dixie Leather Corporation,* for the best in TEXTILE LEATHERS.

100 YEARS OF SERVICE TO INDUSTRY

GRATON AND KNIGHT

DIXIE

Textile Leathers

FAMOUS ORANGE LINE TEXTILE LEATHER

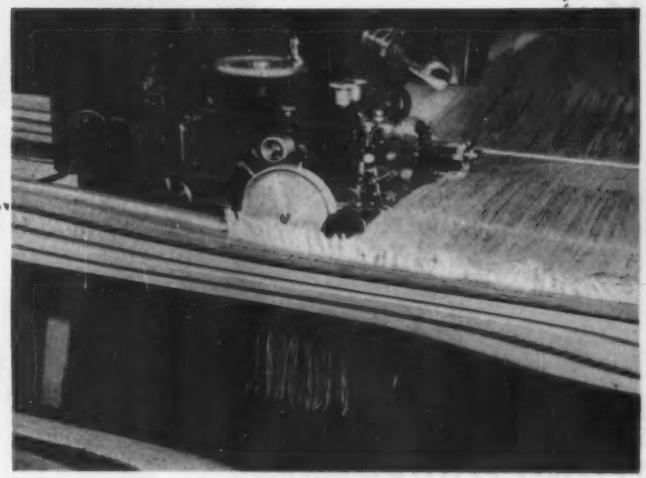
GRATON & KNIGHT COMPANY, WORCESTER, MASS. • DIXIE LEATHER CORPORATION, ALBANY, GEORGIA Affiliate

KNOT-TYING MACHINE
Speeds Worsted-Warp Preparation

- *Livingston Worsted eliminates hand-tying*
- *Samples are produced in half of previous time*
- *Leases can be eliminated*

By E. H. HELLIWELL
New England Editor, TEXTILE WORLD

MODERN WARP-TYING METHODS have enabled Livingston Worsted Mills, Inc., Holyoke, Mass., to cut sample-production time more than 50%. Preparation techniques perfected at Livingston combine with tying-machine features to account for the satisfactory results obtained.



***VERSATILE KNOT-TYING MACHINE** can tie rayon yarns to worsted yarns as efficiently as it ties two worsted yarns.*

PREPARATION IS THE SECRET

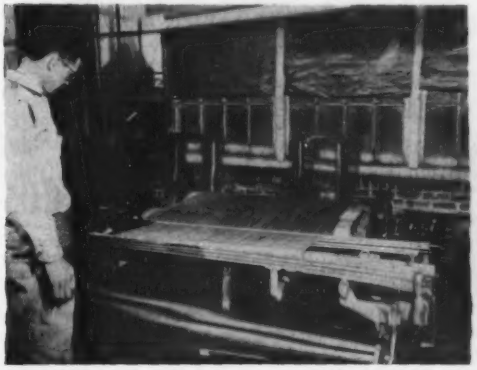
Proper preparation of the warp to be tied is the most critical part of the tying-in process. One difficulty encountered in the preparation of worsted warps has been the roughing-up of the yarn by the brushing required to straighten and align the warp ends. Livingston has developed a combing method that eliminates brushing.

Two combs, made from old reeds, are used in alternation. The first comb holds the yarn while the second one is pulled through the last 2 ft. of the warp. Stray fibers are laid along the yarn instead of being pulled out of line.

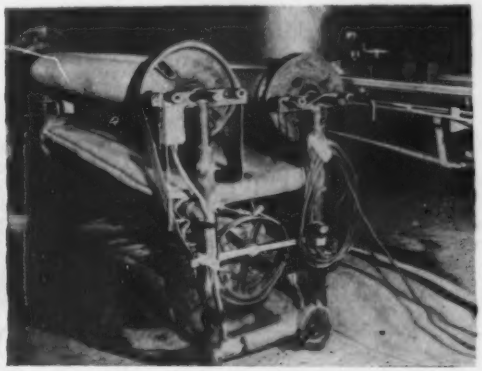
AUTOMATIC ALIGNMENT AND TENSIONING

After the two warps are combed, they are set into the knot-tyer and lined up. The proper alignment essential to tying is maintained in the

(*Continued on page 178*)



***SAMPLE WORSTED WARPS** like this one are tied in about 15 min. at Livingston. John Carpenter, who perfected the system used, looks on.*



***SPECIAL STAND** was built to wind sample warps tied end to end as well as to hold them in position behind the knotter.*

First Again!

Dynamaster
Model
No. 107

GASTON COUNTY DYEING EQUIPMENT NOW GIVES YOU ELECTRONIC CONTROL

—the most advanced development in dye temperature measurement and control — the electronic DYNAMASTER, now perfected and fully incorporated in the new dyeing equipment of Gaston County Dyeing Machine Company . . . the same manufacturer who first introduced automatic beam and package dyeing machines.

High-speed, electronic action of the DYNAMASTER now gives *greater* accuracy and *greater sensitivity* than have ever before been possible with any dyeing machinery.

And yet the DYNAMASTER is extremely rugged. Unaffected by vibration, shock, or ambient temperature changes. Unaffected by line voltage fluctuations. Operates in any position, without the necessity of careful leveling. Requires no routine maintenance, never at any time needs lubrication. Operating units easily replaceable without affecting calibration. Simple construction, with few moving parts.

Be among the first to enjoy the advantages of electronic control in your plant. Plan to see it now. Write Gaston County Dyeing Machine Company for full information.

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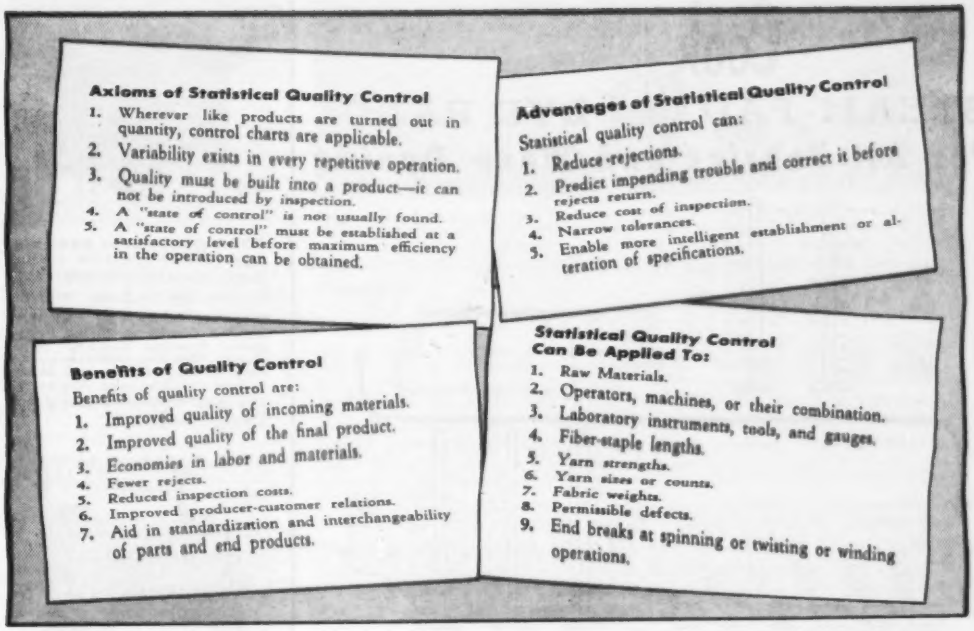

Axioms of Statistical Quality Control
1. Wherever like products are turned out in quantity, control charts are applicable.
2. Variability exists in every repetitive operation.
3. Quality must be built into a product—it can not be introduced by inspection.
4. A "state of control" is not usually found.
5. A "state of control" must be established at a satisfactory level before maximum efficiency in the operation can be obtained.
Advantages of Statistical Quality Control
Statistical quality control can:
1. Reduce rejections.
2. Predict impending trouble and correct it before rejects return.
3. Reduce cost of inspection.
4. Narrow tolerances.
5. Enable more intelligent establishment or alteration of specifications.
Benefits of Quality Control
Benefits of quality control are:
1. Improved quality of incoming materials.
2. Improved quality of the final product.
3. Economies in labor and materials.
4. Fewer rejects.
5. Reduced inspection costs.
6. Improved producer-customer relations.
7. Aid in standardization and interchangeability of parts and end products.
Statistical Quality Control Can Be Applied To:
1. Raw Materials.
2. Operators, machines, or their combination.
3. Laboratory instruments, tools, and gauges.
4. Fiber-staple lengths.
5. Yarn strengths.
6. Yarn sizes or counts.
7. Fabric weights.
8. Permissible defects.
9. End breaks at spinning or twisting or winding operations.

FIBER CONTROL Featured At Quality-Control Meeting

► At its organizational meeting, The Textile Quality Control Assn. featured technical discussion on improvement of quality by fiber control. Here are some of the highlights—

- *. . . Neps cannot be controlled after the carding process*
- *. . . SRRL opener causes less good fiber to be removed as waste*
- *. . . As control becomes more effective, the need for inspection decreases*
- *. . . Sliver quality is improved by high lickerin speeds*
- *. . . Shirley Analyzer evaluates the effectiveness of cleaning operations*

TALKS AND DISCUSSIONS on the control of neps by Ivan Feng, research associate, School of Textiles, N. C. State College, Raleigh, N. C.; new developments in opening equipment by H. J. Cheatham, Head of Cotton Mechanical Processing Div., SRRL, New Orleans, La.; plant management with statistical quality control by W. E. Crooks, plant manager, Celanese Corp. of America, Rome, Ga.; effect of card-lickerin speed on quality by Elliot B. Grover, head, Yarn Mfg. Dept., School of Textiles, N. C. State College, Raleigh, N. C.; and the Shirley Analyzer by Percy W. Woodruff and F. H. Martin featured the organizational meeting of the Textile Quality Control Assn. Here are the highlights of each of these discussions.

You Can Reduce Neps

Three principles are involved in the control of neps. Here they are:

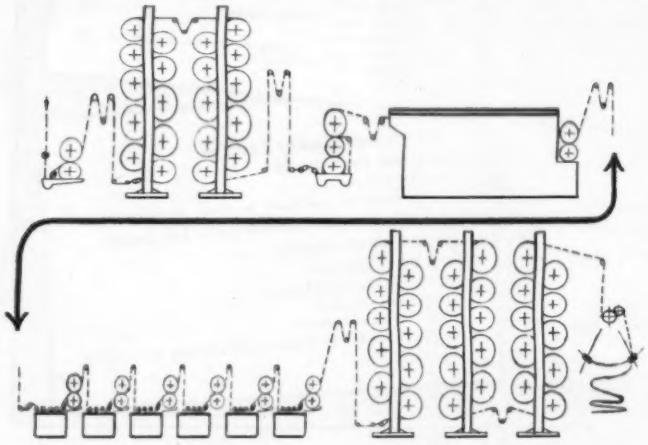
1. **Understand nepology.** You can't control neps if you don't know what they are and how they are caused. The best place to start controlling neps is with your raw cotton. Neps cannot be controlled after the carding process. Mr. Feng has found that neps increase at a constant rate after carding. Almost invariably, the increase in neps from the card web to spun yarn is about 140%. He has varied the drafts in roving and spinning but the neps still increase at this constant rate. His thinking is that drafting operations are going to cause so many neps and there is little that you can do about it.

Neps can be reduced if you select your cotton carefully, don't overbeat the cotton, and use close card settings. Checks on the maturity ratio of fibers in a single nep show that the neppy fibers average between 35 and 40% maturity. Normal fibers range from 85 to 90% maturity. In other words, the maturity ratio is an index to the neppiness of cotton.

The more you beat cotton, the more you roll it and the more neps you cause. Mr. Feng believes that the SRRL cotton opener is a step in the right direction. The best way to clean cotton is to open it first. In this way, you don't beat the cotton as much,

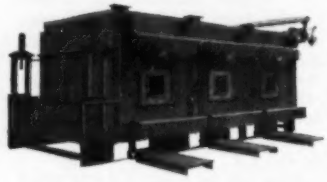
(Advertisement)

Cook P&N STEAM-PAD DYE RANGE
For All Fabrics and Warp Dyeing



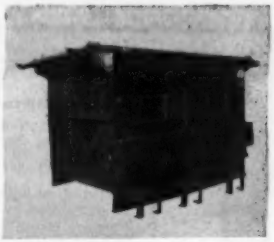
We now have in operation ranges of from 50" to 110" face on cotton, rayon, acetates, corduroys, wool blends, etc. From our own shops we can supply modified or complete ranges to fit your requirements.

COOK Internal Tension Control (Patent Pending) makes possible successful operation of any size Ager

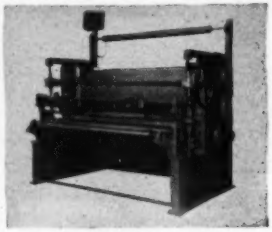


Our latest addition to the COOK Steam-Pad Dye Range is an Ager (5623–1) with *automatic internal tension control* (Pat. Pend.) which permits processing of even fine rayons without damage. This machine has an entrance seal which really seals, a steam-heated ceiling which really eliminates drips and provides uniformity of steam conditions. Many millions of yards of broadcloths, corduroys, work clothes, wide sheeting, rayon dress goods and even wool blankets have been processed through COOK Steamers. From the very beginning of the Steam-Pad Dyeing Process, COOK has played an important role in its successful development. Individually or as a complete range the representative machines shown here can be relied upon to produce a maximum amount of goods per dollar invested.

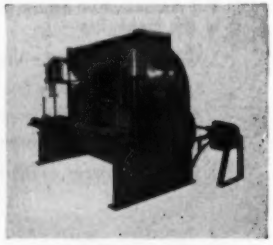
All COOK machinery is fabricated in our own shops allowing design flexibility *without* premium cost. Stainless steel fabrication eliminates broken castings and factory-made repair parts. All machines are guaranteed to perform as specified. Your request for information will receive prompt attention.



COOK Continuous Desizing Ager (4960-1) provides a uniformly saturated atmosphere and handles the material without wrinkling or excessive tension. Smooth flow with COOK Automatic Tension Control (Pat. Pend.). Entrance and exit steam seals which really do seal. Made in floor or ceiling type. Also available as combination Desizing and Dyeing Steamer.



2 Roll Padder (5602-2) Sturdy box-type frame, fool-proof pressure control and reliability make this padder increasingly popular where absolutely level padding is required. The lever-set pressure control is greatly improved to eliminate any binding and includes a new design roll separator. In 5, 10, or 15-ton capacity and any desired width.



3 Roll Padder (2947-1) Pneumatic pressure control with latest air cylinder design provides uniform and accurate pressure on each side. Single or dual control panel. Nip roll designs engineered to eliminate deflection. Rolls mounted in self-aligning spherical bearings. In 5, 10, or 15-ton capacity with infinitely adjustable pressures. Any desired combination of stainless steel and rubber covered rolls.

COOK-P&N MACHINE CO., INC., 365 Dorchester Ave., Boston 27, Mass.

and you don't form as many neps.

Wide settings in the card cause the fibers to be rolled and neps inevitably result. Close settings keep the fibers from being rolled and, as a result, you get less neps.

2. Keep Equipment in Good Condition. You need a sound maintenance program. Surfaces that the cotton comes in contact with must be kept smooth and free of burrs, which may cause the cotton to snag. Frequent stripping and grinding of the card are important. Don't let the cylinder load up any more than you can help. The more it loads, the more neps you will have.

3. Select Speeds That Give Best Results. Most mills run card cylinders at 165 rpm. because that's the speed they have always used. Some mills are going as high as 192 rpm. and are getting good results. Mr. Feng said that he believes the nep count is reduced with the higher cylinder speeds.

Research has shown that fewer neps are made if the ratio of the surface speeds of the cylinder to the lickerin is 1.16 to 1. A lickerin speed of about 800 rpm., with a cylinder speed of 165 rpm., will give that ratio. This higher lickerin speed causes the fibers to be transferred from the lickerin to the cylinder more gently, and fewer fibers are handled by each tooth on the lickerin.

As a rule, you will get more waste under your lickerin with this high speed; but you get better carding and less waste on the cylinder, doffer, and flats. An increase in the angle of setting of the mote knives is advisable if you increase your lickerin speed. Good results have been obtained with the use of a perforated screen under the lickerin. Mr. Feng stated that the higher lickerin speed increases the breaking strength of the yarn. Experiments have been run with exceptionally high doffer speeds, but the results have not been proved in mill-scale tests yet.

New Opening Equipment Described

Mr. Cheatham described the principles of operation of the newer type cotton-opening machines. Included were the Pneuopener, developed by the Shirley Institute, Manchester, England; the Superior cleaner; the Continental Gin Co. cleaner; the Lummus Super-Jet cleaner; and the SRRL opener. The need for improved opening and cleaning equipment was indicated by the fact that about 15% of the 1950 cotton acreage was harvested by mechanical methods. This mechanically harvested cotton contains an excessive amount of leaf trash, sticks, grass, and shale.

Mr. Cheatham dealt mainly with the SRRL opener. Several companies have been licensed by the government to manufacture the opener. The cost has not been announced yet, but it is expected to sell for about $5,000.00.

In reply to a question from the floor, Mr. Cheatham stated that when the SRRL opener is added to the opening line, less waste, percentage-wise is removed from the cotton. How-

(*Continued on page 184*)

CHAIRMAN of the association is Clyde E. Moss (second from left), quality manager, Firestone Textiles, Gastonia, N. C. Other officers are: vice chairman, F. H. Martin (second from right), Springs Cotton Mills, Lancaster, S. C.; secretary, W. A. Thomason, Jr. (left), Southern editor, TEXTILE WORLD, Charlotte, N. C.; treasurer, George E. Archer (right), Uster Corp., Charlotte, N. C.

Over 80 mill men attended the organizational meeting of The Textile Quality Control Assn. on April 13. The meeting was held at the School of Textiles, N. C. State, Raleigh, N. C., and the group in attendance included mill managers, superintendents, overseers-quality-control and research men, laboratory technicians, and other men professionally interested in quality control. The men came from North Carolina, South Carolina, Georgia, Virginia, Pennsylvania, New York, Maine, Louisiana, Texas, and Alabama. Officers elected are shown in the accompanying photograph. A board of directors was appointed by the chairman to draw up a constitution and to act as an advisory group for the association.

It includes the officers and Percy W. Woodruff, Erwin Mills, Inc., Durham, N. C.; Worth Kirkman, Pilot Mills Co., Raleigh, N. C.; Elvin H. Bond, U. S. Rubber Co., Winnsboro, S. C.; R. H. Souther, Cone Mills Corp., Greensboro, N. C.; V. B. Holland, Cannon Mills, Kannapolis, N. C.; J. J. Such, Kendall Mills, Charlotte, N. C.; Dane S. Hamby, School of Textiles, N. C. State College, Raleigh, N. C.; and George Malone, Exposition Cotton Mills Co., Atlanta, Ga.

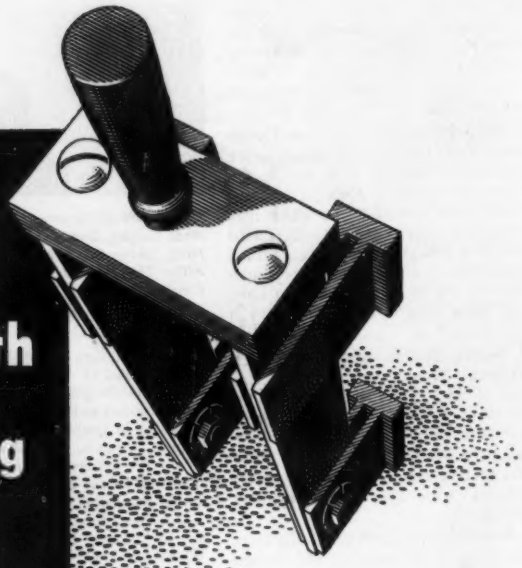
The aims and objectives of the association were broadly outlined as follows: (1) the development and dissemination of knowledge for the better control of quality in textiles. (2) The development of ideas to help mills produce better products at the same or lower costs and the same or higher production. (3) Investigation of techniques, equipment, and factors affecting the quality of textiles in process. (4) Study of the application of quality control to mill operations.

The association agreed to meet two times each year. Membership in the association is open to any person who has an interest in textile quality control. Meetings will be held in North Carolina, South Carolina, Georgia, or Virginia.

AN EVALUATION of the Shirley Analyzer was presented by Mr. Martin, above, and Percy W. Woodruff, Erwin Mills, Inc., Durham, N. C. The Shirley Analyzer can determine the effectiveness of a cleaning operation and the quality of the waste made. It was also used to investigate the damage that lickerin-type cleaning does to fibers.

RESULTS OF RESEARCH on neps were presented by Ivan Feng, research associate, School of Textiles, N. C. State College. He is shown as he demonstrated the N. C. State nep-counting template. Talks were also given on new opening equipment, effect of lickerin speeds on waste and quality, and statistical quality control.

They Save $358.54 a Month by not Pulling this Switch



Every day the machinery in a Clinton, Mass. plant* had to be stopped for a half hour while those machines were lubricated. Every stop meant lost production time plus a $14 expenditure for lubrication.

The Clinton people called in an Alemite Lubrication Engineer. They wanted to know if they could eliminate the costly interruption in production time. They felt that lubrication was costing them too much.

The Alemite Lubrication Engineer studied their problem and recommended a system that automatically lubricates the machinery without any shut-down. What's more, lubrication cost was cut from $14 a day to only 21c a day. That saving alone paid for the entire investment in just 43 days.

Call Your Alemite Lubrication Engineer

No matter what size or type of plant you operate, Alemite can show you dozens of ways to save through the more efficient handling of petroleum products. Call your local Alemite Industrial Distributor now or send for the free booklet "11 Ways to Cut Production Costs." Simply attach the coupon below to your letterhead. Dept. J-71, 1850 Diversey Parkway, Chicago 14, Ill.

*Name on request.

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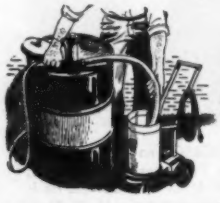
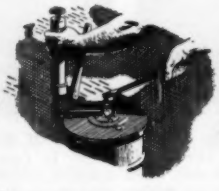
1. Methods 2. Lubricants 3. Equipment

Another Product of Stewart-Warner

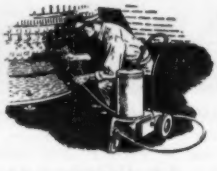
Alemite Cuts Costs 3 Ways



1. In transferring lubricants... cuts man hours 63% for every 100 pounds transferred. No mess, no contamination.



2. In loading grease guns... saves 3¾ man hours for every 100 pounds of lubricant loaded into hand guns.



3. In applying lubricants... saves up to 23.9 man hours for every 100 pounds of lubricant applied to bearings.

FREE! Valuable booklet—
"11 Ways to Cut Production Cost"
(Simply attach to your letterhead)
ALEMITE, Dept. J-71
1850 Diversey Parkway, Chicago 14, Ill.

We'll include facts on the new Alemite Oil-Mist System, too—(OIL-MIST atomizes oil into mist, circulates it to bearings under pressure. Increases life of bearings as much as 17½ times).

Name.....

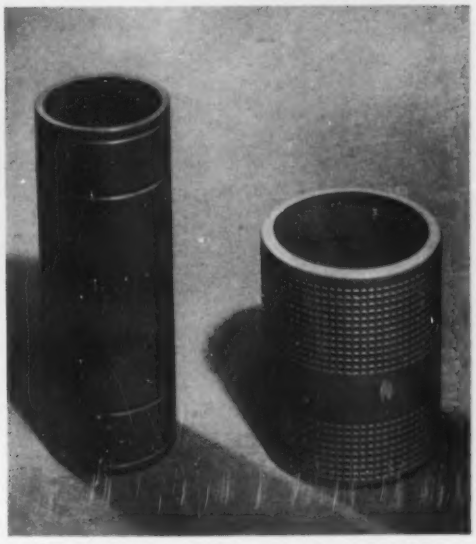
Company.....

City.....State.....

TEXTILE Equipment NEWS

Textile Specialty Line Announced by U.S. Rubber

WARP TUBES and cop butts are made of Uscolite rubber-plastic compound and are said to be extremely resistant to crushing.



SPOOLER SLEEVES for Barber-Colman spoolers are available in two sizes and three colors. They have excellent resistance to chipping.

A new line of textile-mill specialties for carding, spinning, twisting, throwing, winding, and weaving has been introduced by the Textile Specialty Div., United States Rubber Co., 1 Market St., Passaic, N. J.

Lap-Winder Rolls

The U. S. lap-winder roll is molded from a hard, tough Enrup compound that is highly resistant to chipping and breaking. Because of its toughness, this roll is said to give an extremely long life despite the hard usage, dropping, and throwing to which lap-winder rolls are subjected. The standard, 9-in.-long by 4½-in.-diameter roll weighs only 2¼ lb.

The roll can be used on both combers and lap winders.

Quills

U. S. quills are molded from a rubber-plastic Uscolite compound. Uscolite quills are said to be highly resistant to moisture and to always retain their original shape. They will not chip or splinter and have no tendency to soften at the tip when run through conditioning agents.

Because of their toughness, Uscolite quills generally do not require brass bushings since very little wear is shown after several years' service, according to mill tests. Bushings, however, may be molded into Uscolite quills and are supplied on request. These quills are fitted with three rust-resistant rings.

Since each lot of quills is molded to order, it is possible to provide an excellent and uniform spindle fit.

Uscolite quills are available in two sizes, 8 and 8¼-in., both with No. 3 butts and in three colors—blue, gray, and brown. They are recommended for all mills except those conditioning yarn above 170° F.

Cop Butts

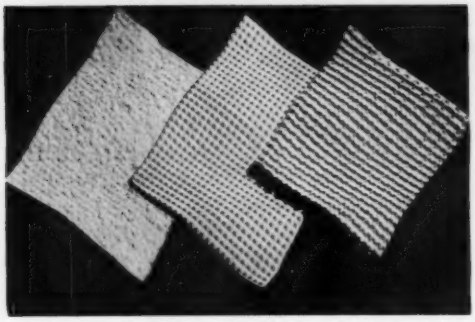
Uscolite cop butts for use in duck and carpet mills are very tough and resistant to breaking, chipping, denting, and splintering. Uscolite cop butts are non-marking, and have long life and excellent winding and loom performance.

Tapered Warp Tubes

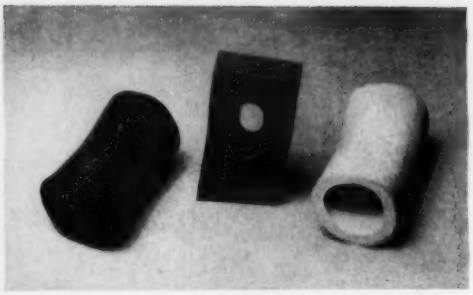
Uscolite tapered warp tubes are available in three sizes currently—3S-982-9 in., 3S-984-9 in., and 3S-989-10¾ in. Other sizes will be available. Colors are blue, gray and brown.

These tubes are molded from the toughest Uscolite compound to resist abuse in a thin-walled tube. They are said not to crush easily nor to chip, splinter, or rough up around the ends. They hold yarn well to minimize sloughing. Because of their elasticity, Uscolite warp tubes do not tend to telescope in the spooler and thereby reduce problems of choking on the conveyor belt.

Uscolite warp tubes are molded with a definite stop at the top to provide a uniform spindle fit. Because of this



TAKE-UP AND SAND-ROLL COVERING is available in three types designed for use with various fabrics.



SPINDLE-BUMPER TUBING, loom bumpers, and presser-roll tubing are made of specially compounded rubber. A feature of the spindle-bumper tubing is that failure is complete when it comes, not gradual.

molded stop, Uscolite tubes will not work down on the spindle. They are easy to doff and easy to stop when ends come down, according to the manufacturer.

Spooler Sleeves

Uscolite sleeves are supplied in both the Type-A and Type-C sizes for Barber-Colman spoolers. They are available in three colors–blue, gray, and brown.

Besides exceptionally long life, Uscolite Sleeves have excellent resistance to chipping around the edges. This chip resistance is said to minimize creel breaks on the warper.

Face-Drive Twister Spools

Uscolite face-drive twister spools are available for all types of face-drive twisters. They have very high crush resistance and will resist chipping, denting, and breaking. They are recommended for all types of fibers.

Spinner Belting

U. S. Royal spinning-frame belting is made from a patented Ustex-nylon duck that features high strength and low stretch. It is furnished with either a natural-rubber or oil-resistant synthetic jacket. The jacket is put on the belt under less tension than the carcass to assure a long surface life. The jacket is not under strain when the belt is at full load.

The spinner belting has a high friction surface that provides maximum, uniform spindle speed. Since the belt has very low stretch, high spindle speeds are maintained without frequent adjustments.

Spinner belting is available as endless sleeves made to order and cut to belt widths, rolls, or as slab stock to be spliced in the field, or as custom-made belts spliced endless in the factory. The company does not recommend metal fasteners on this belting but will supply splicing instructions.

U. S. Royal spinner belt is recommended for all types of up-twisters, ring twisters, winders, and Rockwood drives.

Take-Up-Roll Covering.

U. S. Royal Pyramid roll covering is manufactured for use on all makes of looms and is recommended for use on all types of fabrics except sateens. It has a very positive grip that will not allow the cloth to slip on the roll; it is resistant to oils, dyes, and has exceptionally high abrasion resistance. It has a strong backing that makes it easy to apply to the sand roller.

U. S. Royal Traction-Top roll covering is designed and compounded to give excellent holding qualities and long life. It is recommended for use on all makes of looms and for various types of materials such as filament rayon yarns and other synthetic fabrics, broadcloth, and other cotton cloths. This material has an exceptionally strong backing that makes it very good for use on take up rolls in tire-cord mills, where it is necessary to apply the covering under high tension.

U. S. Royal Acetate-Resistant covering has the pyramid design and is specially compounded for use in mills using acetate warps. It is recommended for use only in mills weaving synthetic fabrics. It has exceptionally long life and is very easy to apply.

These roll covers are available in either 2-, 3-, or 4-in. widths and are put up in 100- or 250-ft. rolls.

Spindle-Bumper Tubing

This material is furnished in four different sizes to fit spindle-bumper rods. This material is compounded to be oil resistant and to have exceptionally long life. It is very easy to install and is economical. It is recommended for use on all box-type looms. Another feature of this spindle-bumper tubing is that failure, when it occurs, is complete. There is no tendency, as in some other bumpers, to fail gradually thereby requiring adjustments on the loom as it is in use.

Loom Bumpers

U. S. Royal bumpers are manufactured from a special compound that was developed to give excellent loom performance and long life. Bumper stock is supplied in large slabs that are cut to size by the user to show considerable savings. These bumpers are used on all types of box looms.

Presser-Roll Tubing

This material is made and compounded to give long life, excellent performance, and high economy. The tubing, which is used on the presser roll on all types of looms, is supplied with $\frac{1}{8}$-in. wall thickness and any specified inside diameter, either in loom widths or continuous roll lengths. It is resistant to dyes, oils, and acetate and is produced from a very tough compound that enables it to give years of use without replacement. An important feature is that only a very short time is required to cover a presser roll, thereby reducing labor costs in the roll shop. This tubing is applied to the roll merely by starting one end on the presser roll, inflating with an air hose at the other end, and sliding the tube onto the roll. Only 2 or 3 min. are required for covering each presser roll.

Warp-Compressor-Roll Covering

U. S. warp-compressor-roll covering is recommended especially for rolls on tire-cord looms and for use on presser rolls as a replacement for felt. This covering shows exceptionally long life and can be used satisfactorily on special applications as a cover for rolls on inspection tables. This material, although it is quite tough and has heavy, long-wearing qualities, is a very soft, sponge-like covering which does not groove as harder roll covers will

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1 Tie-in Tubes
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5 Loom Beam Repair Tubes
6 Spooler Cheese Cores
7 Rayon Cake Forms
8 Cork Covered Cones
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10 Self-Weighted or Floating Roll Covers
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13 Aluminum Ball Warp Mandrels
14 Ball Warp Tubes

Most SONOCO Specialty items are used in connection with reducing cost of operations by providing greater efficiency, greater speed or reducing man hours.

If it's a problem in textiles that paper can solve, you can depend on SONOCO for exhaustive research and development.

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do when yarn and cord pass over them under tension.

The covering is available in widths of 2 or 3 in. in 250-ft. rolls. Thickness is approximately $\frac{1}{16}$ in.

Loom Strapping

U. S. loom strapping is furnished as either a rubber or neoprene compound and has an exceptionally good flex life, which in turn gives the strapping extremely long life. It can be supplied in any width as ordered and is available in continuous roll lengths as required. This strapping is recommended for use on every type of loom.

The oil-resistant neoprene strap is specially recommended for modified looms, where there is a tendency for oil and grease to get on the strap. U. S. Royal strapping reduces harness adjustments because of its low stretching characteristics.

Winder Pads

This item is new to the industry and has proved very satisfactory for use on Model-101 and -102 Foster winders, where it is applied at the base of the spindle. This pad is used to eliminate vibrations of the winder spindle, thereby reducing yarn chafing.

Winder Tires

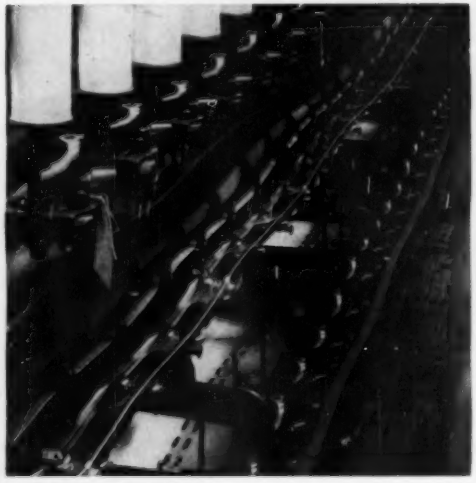
Winder tires are made in two standard sizes for the Abbott winder, models 62 and 64. Other sizes for other type winders may be ordered to specification. U. S. winder tires are said to provide proper speeds without slippage and to maintain the correct amount of friction in the specialized rubber of which they are formed. The tire is strong enough to withstand the wear of traveling and has very long life. The compound is not affected by oil or grease and will not pick up lint.

Brake Release Aids Sewing Operations

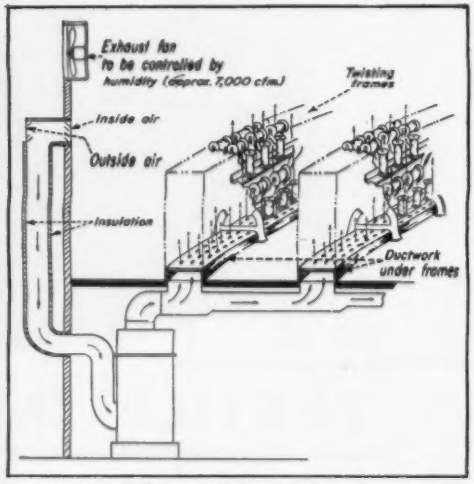
A new brake release for attachment to Amco motor drives has been announced by The American Safety Table Co., Inc., Reading, Pa. Designed to increase output, reduce operator fatigue, and to reduce costs of sewing operations, the release permits free turning of the sewing-machine hand wheel without the loss of time usually required to exert treadle pressure.

When treadle pressure is removed, the brake release moves up against the motor housing and automatically positions the clutch so that it does not touch either the driving member or the brake. The new Amco brake release is adaptable to all latest-type Amco motor drives. The price is $2.50 per unit.

New System Aimed at Uniform Humidity for Twisters



HUMIDITY AT THE FRAME, in one mill test, was held at 50%, instead of the previous 20%, by use of underframe ducts.



INSTALLATION OF FRAME-CONDITIONING can be from beneath the frame (as shown) or from above by separate air vents to each frame.

Frame-conditioning of textile machinery, especially twisters, has been announced by Air-Perme-Ator Mfg. Co., Paterson 2, N. J. Humid, saturated air is circulated within a frame without interference from excessive heat accumulation from motors or spindles. Static is also said to be eliminated as a trouble source.

Constant air-changing is said to result in more comfortable working conditions without loss in efficiency. An example of mill results showed maintenance of frame humidity at 50%, where values of 20% were not uncommon before the installation.

The unit operates under specific controls by permitting blending of the inside and outside air according to the wet- and dry-bulb temperature of the outside atmosphere. The controls are set so that when the temperature reaches the set-point, the exhaust fan begins removing the same amount of air that has been brought in and produces constant air changes. Formerly, temperature rose to 110° F. with a very low humidity. With this new installation, temperature has been brought down to 80° F., maintaining 60% relative humidity. Special three-way controls, each working interdependently with the other, are provided for the temperature and humidity.

The temperature of the outgoing air from the unit is governed by the wet-bulb temperature from the outside atmosphere. For example: if the wet bulb outside is 65° F., the outgoing air of the unit will be 68° F. and will contain 84% relative humidity.

During the heating season, or on cold days, warm water is supplied.

Precision Straightness

You can be sure of top quality knitting results with Textile Spring-Beard Needles. Textile's quality controls—automatic and electronic—assure precision straightness of butt, shank and beard. You get true alignment in the knitting bar, more even stitches, longer lasting needles.

Precision straightness is one of the many advantages you get in Textile Spring-Beard Needles—advantages that result in better fabrics, increased profits.

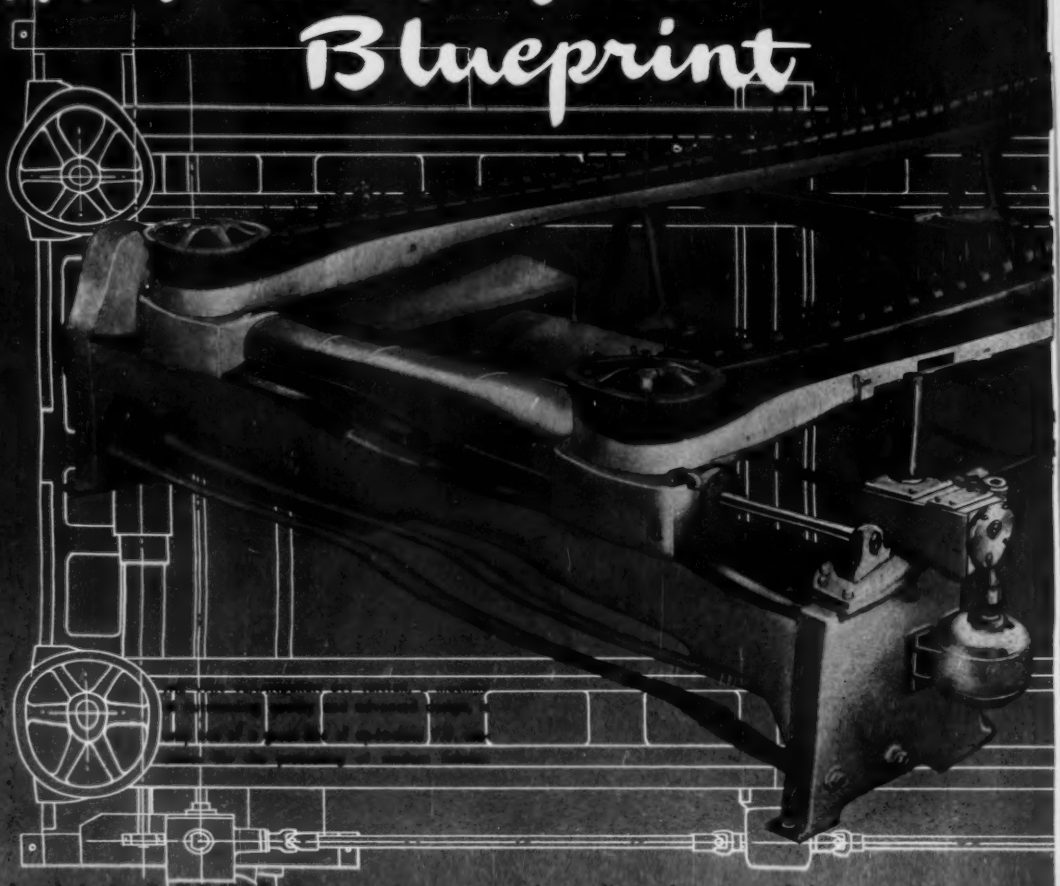
TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

For Full Fashioned and Warp Knitting

We Put it in the Blueprint



Before designing the V.V.611 Tenter our engineers studied with critical eye [illegible] tenters then in use — including our own — [illegible]:

that many tenters were too lightly built to resist the punishing vibration of thousands of pounds of whirling chain and the high temperatures frequently employed.

that existing standards of workmanship and materials were deficient for the type of service that tenters must withstand.

that out-of-date designs were not delivering quality performance with the greatest yard for yard economy.

Our engineers deliberately set out, right from the blueprint stage, to design a tenter that would embody, in one machine, massive ruggedness and advanced engineering design. The 611 Tenter, built to the high calibre of workmanship associated with Van Vlaanderen and of the finest materials, sets a new standard for increased production, quality work and trouble-free service — delivering the greatest yard for yard economy of any tenter on the market.

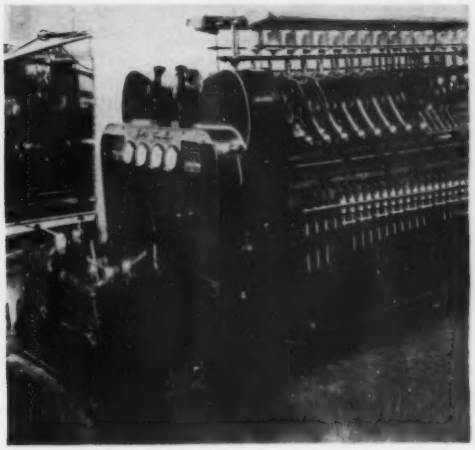
Write or phone to see the machine itself.

VAN VLAANDEREN

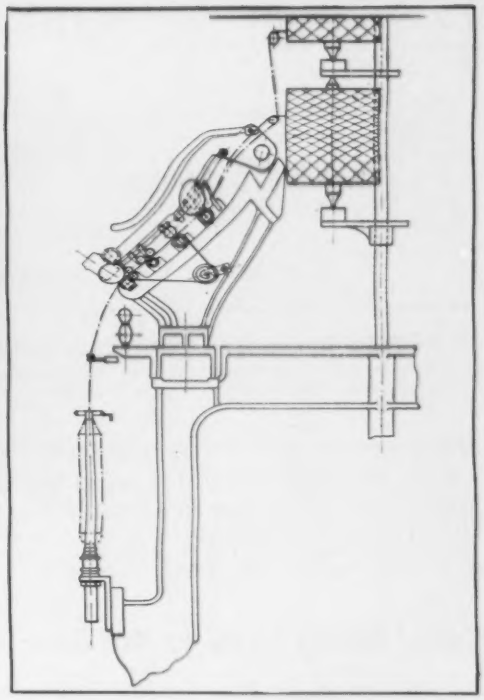
Van Vlaanderen Machine Company, 370 Straight Street, Paterson 3, New Jersey, U.S.A.

World's largest manufacturer of machinery for processing modern fabrics

Worsted Spring-Weighting System Gives Better Fiber Control



***BETTER FIBER CONTROL** and handling of slivers from all drawing systems are two advantages claimed for this high-draft system.*



***PRESSURE** on feed and drafting rolls can be adjusted separately in this new spring-weighting system.*

A new drafting assembly for worsted spinning frames, with a new spring-weighting device made by Isotta Fraschini, has been announced by Stellite American Corp., 60 E. 42nd St., New York 17, N. Y., U. S. representatives.

The high-draft device has five rollers and a leather apron. The new, patented draft assembly permits adjustable pressure on the feed roll. Above the back roll there are pressure rolls with a pivot mounted on ball or roller bearings similar to those placed above the draft roll. The pressure can easily be adjusted by setting the screw on a cylindrical spring.

The adjustable pressure on the feed roll permits the processing of twisted or untwisted slivers from any drawing system such as French, American, Anglo-Continental, or Bradford. It is necessary only to have the creels adjusted for each different kind of sliver bobbins used.

On the rolls placed above the draft rolls, the pressure is adjustable within large limits by setting a screw.

The device offers the advantage of regulating the pressure on the feed rolls and the drafting rolls.

To facilitate cleaning and to reduce the maintenance work of the operators, the four carrying rolls (having diameters of ¾, 30, 31, and 1⅛ in.) are placed on saddles on the upper arm of the device. Thus, when the arm is lifted, all four carrying rolls are lifted too.

The position of the four cylinders is easily adjustable to any fiber length.

The new device eliminates all levers and springs or levers and weights.

The high draft is suitable for fibers from 1 to 8 in. in length or longer.

Advantages claimed for the spinning frame equipped with the new patented device are:

1. Work of the operators is facilitated.
2. Better control of the fibers during the drafting operations is provided.
3. Maintenance expenses are reduced.
4. Processing of slivers coming from any kind of drawing system is permitted.

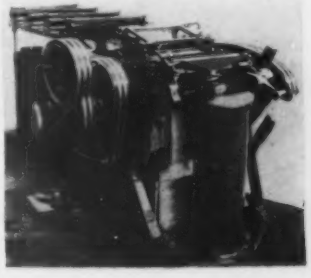
Rectilinear Comb Designed for Synthetics

A new rectilinear comb for processing long-staple synthetics that has a new modified sword designed to obtain a well-condensed regular web has been announced by Stellite American Corp., 60 E. 42nd St., New York 17, N. Y. The comb is also equipped with a new, adjustable, false-twist device said to produce a firm sliver.

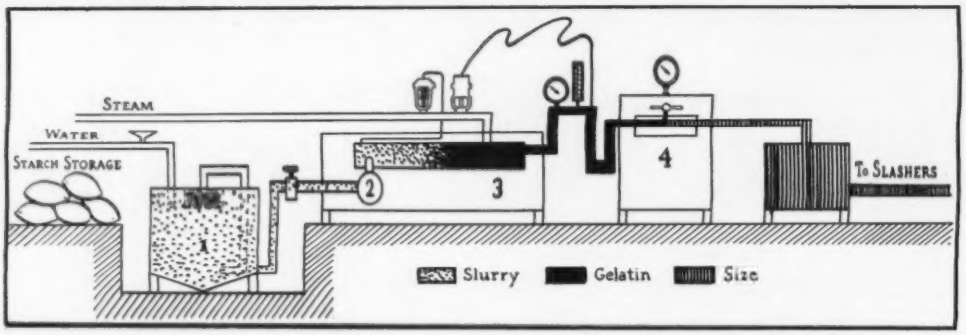
All synthetic fibers from 1 to 8 in. can be processed on this comb which can be set precisely so as to eliminate neps and "dandruff" present in some of the synthetics. Quality of the yarn is said to be improved, and the cost in spinning and burling is said to be reduced.

The comb is being built in 13- and 19-in. web width.

The comb can be supplied either with can creel or ball creel.



***SYNTHETIC FIBERS** from 1 to 8 in. in length can be processed on this rectilinear comb.*



THE HYDROPULSE consists of: (1) slurry tanks in which starch and other ingredients are mixed with water (cooking kettles can be used), (2) a booster pump that forces the cold mix through (3) a heat exchanger, where the mix is heated to the swelling-point of the starch, and (4) the homogenizer, which produces a continuous flow of size.

New Homogenizer System Eliminates Batch Preparation

A new homogenizing method of preparing warp size has been announced by Scott and Williams Inc., Empire State Bldg., New York 1, N. Y. Called Hydropulse, the system is said to eliminate batch-preparation of size. No live steam is used, hence there is no varying dilution. Since there is no storage of size, all warps are slashed with fresh size.

The homogenizer works full time: there is no loss of expensive homogenizing capacity. There are no crossheads, cross-head guides, or packing-and-stuffing boxes to be maintained.

Control Settings Locked by New Cover Design

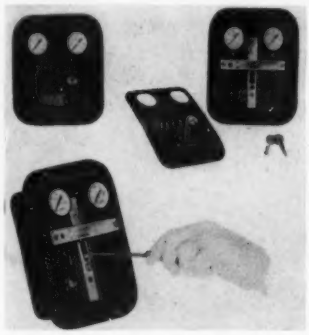
A new cover lock for the TAG non-indicating controller has been announced by TAGliabue Instruments Div., Weston Electrical Instrument Corp., 614 Frelinghausen Ave., Newark 5, N. J. The new feature eliminates possible financial, labor, and time losses that might be caused by tampering.

In the new design, the control-setting mechanism is a spindle with a slotted tip placed entirely behind the locked cover of the case. Adjustment of the control is made by unlocking and removing the cover, inserting a screw driver in the slot of the spindle, and turning in the desired direction. Once set, the control is literally locked in by replacing and locking the case cover with only the processing foreman or appropriate engineer having access to the mechanism. Previously, a knob located on the outside of the case, available to anyone, was used for regulating the instrument.

The lock is conveniently situated at the middle right side of the case to line up with a bar mounted horizontally on the inside. The cover is lined with a rubber gasket, making the instrument dust- and weather-proof.

Small in size although sturdy in construction, the non-indicating controller with lock cover is unusually durable and well suited to many automatic control applications.

The instrument, known as model 8352, type 1, is available for either direct- or reverse-acting control applications and operates on the same principle as the previous TAG model. It measures 5¾ in. by 7¼ in.



UNDER LOCK AND KEY—the new lock cover on the TAG non-indicating controller for temperature-pressure saves time, money, and labor by locking—in control-point settings and preventing tampering. Only the man with the key can get in to regulate the control by turning a screw driver in the slotted spindle once the cover is unlocked.

Cotton-Card Drive Uses Standard Motor and Controls

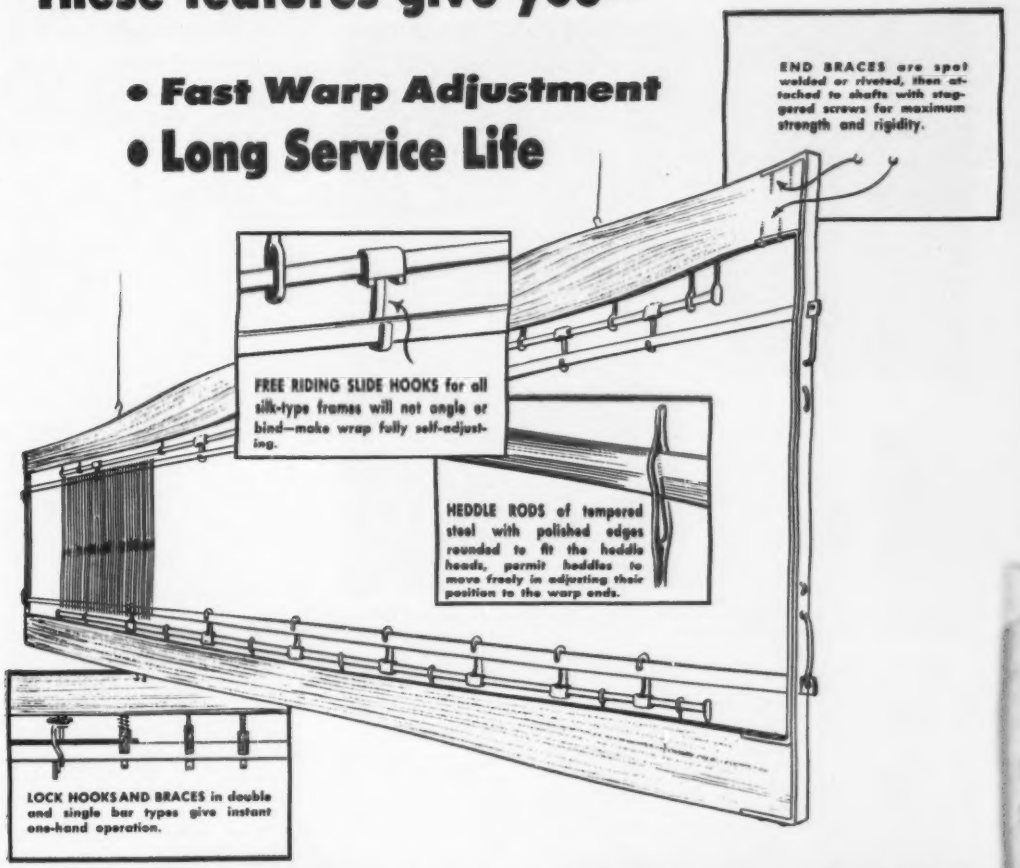
A new, individual cotton-card drive, designed so that heavy starting loads do not require the use of special high-torque motors or special starting controls, has been announced by The American Pulley Co., 4200 Wissahickon Ave., Philadelphia 29, Pa.

The drive uses a standard V-belt with an adjustable-speed sheave on the motor and the centrifugal-clutch sheave on the 5-to-1 ratio reduction unit. This unit is mounted directly on the card drum shaft. The entire drive is mounted in the card arch and is completely supported by the card-shaft pillow block. The torque of the entire drive is designed so that it is taken horizontally by the card frame. The adjustable-diameter sheave on the motor provides for a 25% variation in card speeds and makes possible the best speed for processing various fibers under all operating conditions. This card drive is entirely enclosed in a heavy guard and extends only 3½ in. beyond the card shaft.

These individual drives are said to save space, increase card-room flexibility, and make possible better lighting and ventilation of card rooms.

These features give you—

- **Fast Warp Adjustment**
- **Long Service Life**


END BRACES are spot welded or riveted, then attached to shafts with staggered screws for maximum strength and rigidity.
FREE RIDING SLIDE HOOKS for all silk-type frames will not angle or bind—make wrap fully self-adjusting.
HEDDLE RODS of tempered steel with polished edges rounded to fit the heddle heads, permit heddles to move freely in adjusting their position to the warp ends.
LOCK HOOKS AND BRACES in double and single bar types give instant one-hand operation.

with WALKER *Superior* HEDDLE FRAMES

WALKER SUPERIOR HEDDLE FRAMES, with patented lock hooks and center braces, give you instant one-hand operation for easy warp adjustment on the loom. Walker manufactures frames and frame accessories for all yarns and weaves, including special section frames for narrow fabrics.

Walker Frames combine light weight, strength and rigidity to bring you extra service life at low cost. Select straight-grained wood for shafts is thoroughly air-dried and moisture sealed. Shafts can be finished (paint or enamel) to customer's specifications at slight extra cost. Steel ends and fittings are cadmium plated to eliminate rust. Quick, easy installation and maintenance is assured by convenient Walker—one hand, instant open—lock hooks.

Write for folder describing the many advantages of Walker Heddle Frames and Free Riding Slide Hooks.

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ATLANTIC & RUTH STS., PHILA. 34, PA.
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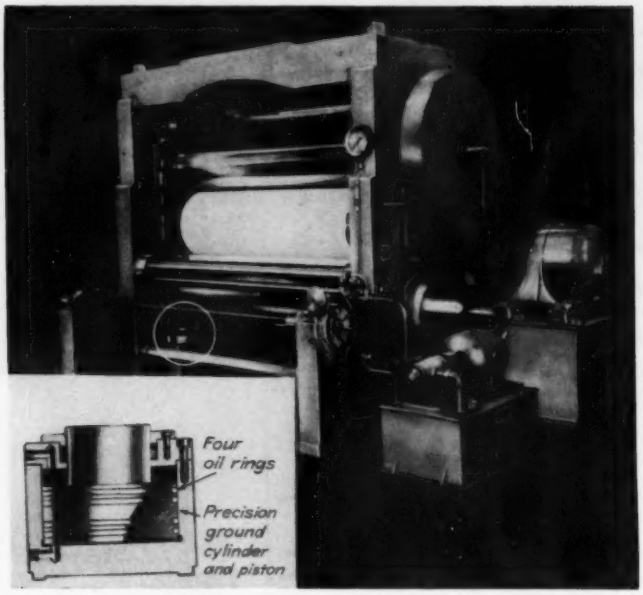
HEDDLES • HEDDLE FRAMES • REEDS

 For more information, write direct or use Reader Service post card.

Improved Calender Reduces Maintenance



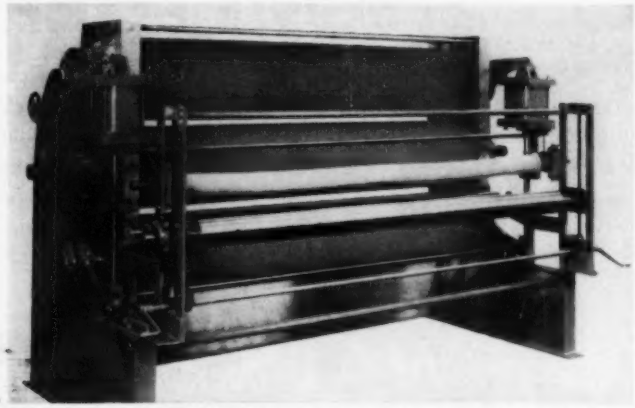
***CYLINDER UNIT** of this calender is now made of forged steel. Accurately machined cylinders and pistons use four step-seal piston rings.*

An improvement in its 80-ton hydraulic calender has been announced by Van Vlaanderen Machine Co., 370 Straight St., Paterson, N. J.

The hydraulic system of the calender has been redesigned in two ways: The cylinders and pistons have been enlarged to maintain an 80-ton nip pressure at an oil pressure of only 770 psi. instead of 2,000 psi. as previously required. The design of the pressure cylinder unit has been greatly improved. Periodic disassembly for replacement of the old-type ram packing is no longer necessary with the new improvements.

Maintenance requirements are said to be lessened considerably.

Padder and Range Eliminate Rethreading



***EITHER DOUBLE- OR SINGLE-STRAND** processing can be accommodated on this 15-ton, 100-in. pneumatically loaded padder announced by Cook P & N Machine Co., Inc., 365 Dorchester Ave., Boston 27, Mass. No rethreading is said to be necessary when the unit is used as part of a complete, steam-dye range in which all units are designed like the padder.*

"Black-Light" Fixtures Cause Fluorescence

A new line of Blak-Ray, high-intensity, long-wave, ultraviolet lamps with applications in the textile industry has been announced by Ultra-Violet Products, Inc., So. Pasadena, Calif.

The invisible "black-light" rays cause certain materials to fluoresce. Variations that are invisible, or nearly so, in ordinary white-light stand out with startling clarity when exposed to the Blak-Ray. This makes the lamps extremely useful for (1) observing, analyzing, and comparing materials, weaves, and dye lots, (2) inspecting for flaws and variations, (3) "invisible" marking during manufacture, (4) locating oil spots on fabrics and tracing their origin, (5) displaying and merchandising manufactured items.

Blak-Ray lamps are Underwriters' Laboratories approved and are equipped with a self-filtering "Black-Light-Blue" tube that allows the long-wave ultraviolet rays (3,660 angstrom units) to pass through. Undesirable rays in the visible portion of the spectrum are filtered out. No additional filters are required, and the cool-operating tubes are said to last for 2,000 to 3,000 hr. Recommended for use at low light levels, the lamps do not, according to the manufacturer, require as great a degree of darkness as lamps using separate filters.

Available in 4-, 8-, 15-, 30-, and 80-w. sizes, the Blak-Ray fixture may be rested on a flat surface, mounted flush to wall or ceiling, or hung from brackets. The 4- and 8-w. sizes have a special trunnion-type bail that allows them to be tilted to any position within a 180° plane of the mounting surface. These models may also be used as portable inspection lights, as they weigh only 1¾ lb. and have an over-all dimension of 3¼x4x6¼ in.

Non-Melting Grease Is for Hot Spots

A new lubricating grease, "Kantmelt," for use on either plain or anti-friction bearings has been announced by Specialty Products Co., 190 Warren St., Jersey City 2, N. J. The grease is said not to melt, even under highest temperature conditions. The product contains no metallic soaps, no fatty acids, no filler, no water, and no alkali. It is said to be completely stable under all conditions of service and storage. A free sample is offered anyone writing on a company letterhead.

*ARIPERM pm

Your reputation won't fade... if your acetate fabrics don't!

***ARIPERM PM® Prevents Gas Fading**

When colors fade, so does consumer confidence in the manufacturer's label; this "backs up", eventually, to the dyehouse. There's no need for this with fabrics (partially or wholly) of ACETATE RAYON, for *they can be given protection against fading from atmospheric gases. ARIPERM P M does the job.* Its durability means exceptional protection through washing and dry cleaning.

ARIPERM P M is especially valuable for dyeing Light Shades, Pastels and Tints, since it does not throw the shade over to the yellow. Application is simple, in scouring or directly in the dyebath. Write for details, sample, demonstration.

Arkansas Co., Inc.
184 Foundry St.
Newark, N. J.

Gentlemen:
I would like to have, without obligation:

- ☐ full details of ARIPERM P M benefits
- ☐ sample and application procedure
- ☐ demonstration in plant

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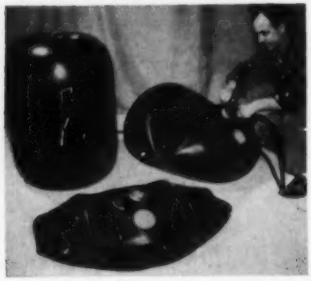
2-7-1

Arkansas Co. INC.

MANUFACTURERS OF INDUSTRIAL CHEMICALS FOR OVER 45 YEARS
NEWARK, NEW JERSEY

55-Gal. Drum Is Collapsible



THIS NEW 55-GAL. DRUM, suitable for shipping liquid, can be collapsed after emptying, is returnable, and is reusable. No vent is needed to fill a collapsed drum.

A new 55-gal. synthetic-rubber-fabric drum for shipping liquids has been announced by U. S. Rubber Co., Rockefeller Center, New York 20, N. Y. The drum can be collapsed after emptying, is returnable, and is reusable. Sizable savings in return shipping costs are claimed with the new drum. More than 2,500 collapsed drums can be shipped in a standard railroad box car that would hold only 300 rigid drums.

Experimental tests made by the maker indicate that the new drum will be suitable for the shipment of oils, greases, fats, acids, paints, emulsions, soaps, dry powders, and a variety of industrial chemicals.

The drum, made of Ustex cord fabric impregnated with synthetic rubber, is molded in one piece. (Ustex cord is a strong, low-stretch cotton textile made by U. S. Rubber Co.) The result is a tough, flexible drum approximating the size of a regular barrel or drum. It is equipped with simple fittings for filling, emptying, lifting, and handling.

The new drum is said to be tough, light in weight, and easy to lift, roll, handle, and stow. It is made of material that is non-corrosive, non-absorbent, and highly resistant to weathering. It is easy to fill, empty, and clean. No venting is required.

When full, the drum retains its shape without appreciable distortion. When empty, it can easily be further collapsed for return shipment and reuse. An empty 55-gal. synthetic rubber-fabric drum weighs less than 30 lb.

The new-type drum is considered to have safety advantages, since it needs no venting while being filled or emptied and therefore can eliminate hazards sometimes encountered in handling certain acids and liquid combustibles. Liquids that oxidize easily can be withheld from exposure to air during removal from the synthetic rubber-fabric drum. Since inner surfaces have no corner pockets, liquid contents can be completely removed and the inside quickly cleaned.

Loom Reed Has Rigidity and Light Weight

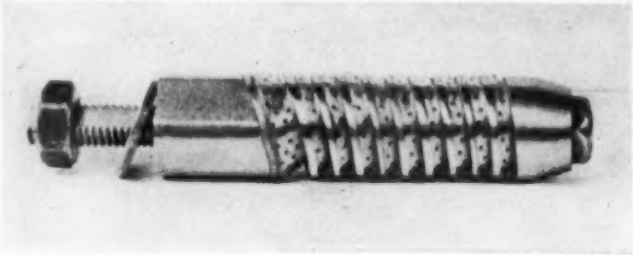
A new type of loom reed has been announced by Emmons Loom Harness Co. of Lawrence, Mass. and Charlotte, N. C.

The reed has the lightness and resiliency of pitchband construction, yet because the ribs are magnesium or aluminum, some of the stiffness and strength of an all-metal reed is also present.

The special RigidReed construction allows the ends of the dents to be held more securely by stronger aluminum or magnesium ribs. End bars riveted in place between each pair of ribs do not require reed caps. This arrangement allows tension to be given the selvage dents by peening the end bars.

RigidReed dents can open and spring back more readily since they do not tend to imbed in the rib as in the some conventional reeds. No tubing, backstrips, or inside metal strips are required for additional strength. The new reeds may be soldered at the ends or used full length. They are available in standard $\frac{1}{4}$-in. and $\frac{3}{8}$-in. rib sizes only. Dents may be either carbon or stainless steel.

Loom Temple Roll Uses Varied-Angle Principle



A RING TEMPLE ROLL, designed to use the principle of eccentric spacers to increase the pitch of the rings, has been announced by Broell Mfg. Co., Windber, Pa. With this principle, a minimum of pull is exerted upon the fabric at the center and tension increases to a maximum at the selvage.

Pins are set from the inside of the temple rings. Rings are standardized to one size for all barrel combinations.

The Broell temple roll is available in all ring and pin combinations, from 5- to 15-ring length. A factory repair service is also available.

Fiber Strapping Withstands 275-Lb. Pull

FIBERSTRAP is tensioned like steel strapping, is non-abrasive, and is non-adhesive.

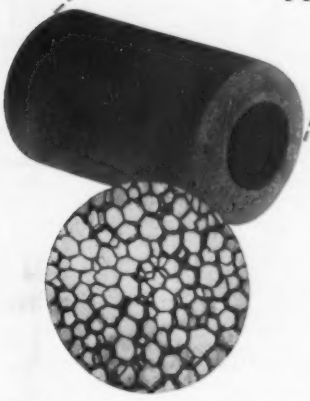
A new strapping, Fiberstrap, which stands a 275-lb. pull, has been announced by A. J. Gerrard and Co., 1950 No. Hawthorne Ave., Melrose Park, Ill. The product is said to retain original strength and ductility under normal conditions and to provide uniform tension.

The strapping is produced in the standard $\frac{3}{4}$-in. width, 0.040-in. thick. It is available in 25-lb. coils, 1,750 ft. long. Price compares with lightweight steel strapping.

(Continued on page 212)

EYEBROWS DISAPPEAR

when you use this cot



Here's why cork cots won't eyebrow. Millions of tiny cork cells like these (here magnified 1200 times) give cork cots their superior friction. As the yarn passes under the cot, these cells act like tiny suction cups to carry loose fibers well back under the clearer board where they cannot eyebrow and fall into the yarn.

Eyebrows don't have a chance to form when you use Armstrong's Cork Cots. These cork cots have a high-friction surface that continually pushes loose fibers well back under the clearer board out of the way. Many mills report to us that these covers not only prevent eyebrows but reduce clearer waste as much as 50%.

Most mill men agree that cork provides one of the finest drafting surfaces known. They know that Armstrong's Cork Cots have the high friction needed to hold a firm grip on any fiber. Cork drafts out strong, uniform yarn on even the finest work.

Made in one piece and preglued at our factory, Armstrong's Cork Cots are easy to install and maintain. They slip on the roll in one simple operation. An occasional buffing keeps them spinning like new for 2 or 3 years on most counts and types of yarn.

For top-quality spinning with complete freedom from eyebrowing, you just can't beat these cots. We'll be glad to put them to the test in your own mill. Call your Armstrong representative today or write Armstrong Cork Company, Textile Products Department, 8307 Arch St., Lancaster, Pennsylvania. Armstrong's Cots are available for export.

ARMSTRONG'S CORK COTS

for high-quality spinning . . . at low cost

Dyes & Chemicals

Orlon Acrylic Fiber Dyed With New Technique

A new-type Orlon staple, designated as type 41, has supplanted the types known as A-3 and A-4. This new-type Orlon staple is being dyed with the cuprous-ion method, using acid dyes.

Du Pont has conducted experiments with this new dyeing technique on a laboratory scale. It is understood that further experiments are being conducted at the present time and that increasingly better results are being obtained.

This article includes only the preliminary results. It outlines the basic method of dyeing Orlon by the cuprous-ion method; and as noted above, some changes in technique may be made before the method is used on a commercial scale.

Here's The Dyeing Method

In the dyeing bath are incorporated a cuprous salt, acid, and an acid dyestuff. However, cuprous salts are unstable even in the solid form, and only cuprous chloride is available commercially. Cuprous chloride exerts a very corrosive action on stainless steel, and it cannot be recommended for use in commercial dyeing equipment. Fortunately, cupric salts can be reduced to cuprous salts. Either copper sulphate or copper acetate can be reduced with Sulfoxite C, Sulfoxite S, or other reducing agents.

In one method successfully employed in the laboratory, copper sulphate, Sulfoxite C, acetic acid (glacial), and Duponol D paste were heated at boil for 5 min. in the absence of material. The resulting suspension was added to the dyebath containing the dye and 2% Alkanol WXN at 80° F. The material was entered and the temperature was slowly raised to the boil. Then 10% acetic acid (glacial) was added over 30 min., and the dyeing was carried out at the boil for a total of 90 min. The dyeings were finished by scouring for 15 min. at 160° F., using 1 g.p.l. Duponol D paste.

In an alternative method, the cupric salt was reduced with Sulfoxite C at the boil for 30 min. as above but in the presence of the fabric. A longer volume was employed for reduction. At the conclusion of the reduction, water was added to reach the dyeing volume and to lower the temperature to 160° F. The dissolved dyestuff, Alkanol WXN, and acetic acid were added. The dyeing was carried out as described above.

The concentration of copper sulfate will vary with the depth of shade to be produced and with the dyestuffs selected for application. For light shades, low concentrations of copper sulfate may be used. Some dyes require a minimum concentration of copper in order to exhaust satisfactorily, and others require at least 10% Work is under way to ascertain whether or not hydroxacetic acid may be used in place of acetic acid.

Several heavy shades have been produced in the laboratory with three arbitrarily selected acid dyestuffs without encountering "blocking" effects. However, box dyeing has indicated that slower dyeing components tend to lag and may cause some difficulty in shade matching. Best results will be obtained with dyes which exhaust at approximately the same rate.

The use of the cuprous-ion technique for the application of acid dyes to type-81 Orlon acrylic continuous-filament and spun yarns at elevated temperatures (250° F.) is being studied intensively at the present time. Heavier shades can be obtained on the continuous-filament and spun yarns of type 81 by this method, but duller shades result with many dyes.

The cuprous-ion technique is not suitable for the production of solid shades on blends of type-41 staple and wool because the wool absorbs much more dye than the Orlon. It is said to be necessary to dye the wool and Orlon as raw stock or top, separately, before they are blended.

Fastness Properties Being Improved

The results reported on to date indicate that dyeings produced by the cuprous-ion technique exhibit minimum fastness to light. In many cases, they tend to go dull in 10 hr. of exposure. Selected dyes, especially in the blue range, had over 20-hr. light fastness, and in heavy shades some withstood over 40 hr. of exposure. Several of the applicable dyes tended to go dull on washing, and at least three of the colors had poor fastness to perspiration. Others were deficient in moist crocking.

Nevertheless, it is believed that minimum fastness properties for many applications may be obtained by this method. In recent tests, it is understood that these fastness properties have been improved. New dyes, particularly in the yellow and red range, are under investigation. In preliminary tests, some of these colors have shown improved fastness and may fill the gap that exists in the line of commercially available dyes.

In view of the dulling that is encountered on washing the dyeings of Orlon, it is said that the use of soda ash or ammonium hydroxide in the scour, subsequent to dyeing, will frequently introduce similar dulling. The resulting duller shade is said to be then stable to subsequent washing and in some cases the light fastness is improved.

New Fast-to-Light Shade Developed for Cotton and Rayon

A new dyestuff, Fastusol Blue L5R, is announced by General Dyestuff Corp., 435 Hudson St., New York 14, N. Y. This straight substantive dyestuff is another in the line of Fastusol dyestuffs that are designed to produce fast-to-light shades on cotton or rayon. It is said to produce very reddish shades of blue in moderate brightness.

Its outstanding property is said to be its fastness to light, which is very good (6) in full shades on cotton and excellent to maximum (7 to 8) on rayon. The fastness to light on rayon is not impaired by urea-formaldehyde or melamine-formaldehyde anticrease finishing. These finishes are said to improve the fastness to washing slightly. The fastness to light is said to be slightly improved in the case of the urea-formaldehyde finish.

Aftertreatment with Solidogen WF powder and cupric acetate or chloride is said to considerably improve fastness to washing and to other wet processings with hardly any change in shade. The hue becomes only slightly greener with the aftertreatment. The rating of fastness to washing is said to be raised by this aftertreatment from poor to fair (1 to 2) to good (3) on cotton, and from fair to good (2 to 3) to very good (4) on rayon. The fastness to water, perspiration, and wet-hot pressing are said to become excellent (5) on both fibers with this aftertreatment.

New Fixing Agent Improves Wet Fastness

A new, straight, cationic fixing agent, Solidogen WF powder, is announced by General Dyestuff Corp., 435 Hudson St., New York 14, N. Y. This fixing agent is said to improve the wet fastness of direct dyeings of cotton, rayon, and other cellulosic fibers. When used alone, it is said to effect a considerable improvement in the fastness to water, perspiration, and hot wet pressing of direct dyeings with little or no change in shade.

It is said to impair somewhat the light fastness. When used in conjunction with copper salt for selected colors, the agent is said to improve fastness to washing and water without any distinct impairment of light fastness, except in a very few minor instances.

The manufacturer states that the agent improves light fastness considerably in more than one-third of the dyestuffs recommended for aftertreatment. Copper salt, however, is said to cause a considerable change in shade in about one-third of the dyestuffs and a distinct change in shade in another third. The change of shade among the remaining colors recommended for aftertreatment is not significant.

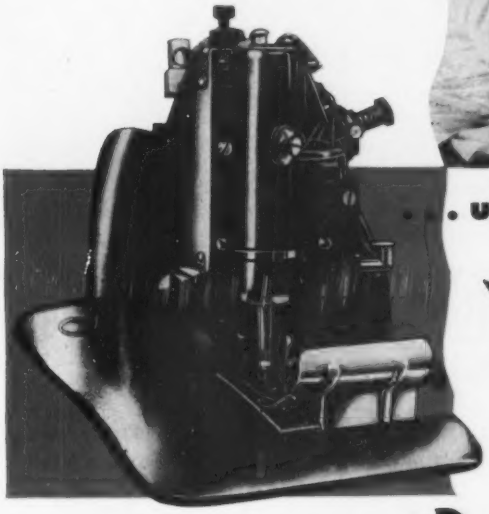
Fast Yellow Dye Developed For Use on Cotton and Rayon

A new dye, Ponsol Yellow 5GLL paste, has been developed by E. I. Du Pont de Nemours & Co., Wilmington, Del., to produce bright greenish-yellow shades on cotton and viscose-process rayon. This dye is said to produce fast-to-light shades that are retained when it is used in combination with other anthraquinone derivative vat colors, such as Ponsol Jade Green, Ponsol Green 2BL, and Ponsol Blue BFN.

(Continued on page 204)

for finest

OVERSEAMING on knit goods . . .



. . . use the

thirty-nine-two

"Purl-Rite"

■ When it comes to quality of work produced, you can't beat Union Special's new, improved *Class 39200* machines for all kinds of overseaming, overedging, hemming, and welting on knit goods. These machines produce the highly refined *"PURL-RITE"* finish in which the stitch formation is controlled with utmost precision. This improved stitch is produced with no sacrifice in machine speed or output. Seam perfection is maintained over varying thicknesses, around curves. *For the complete story, see our nearest representative or write.*

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World's Largest Exclusive Builder of Industrial Sewing Machines

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because it's

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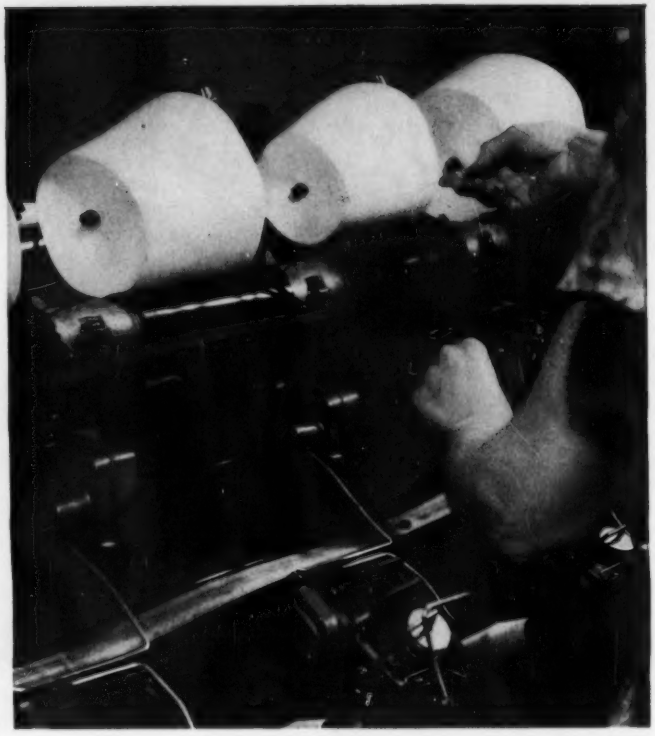
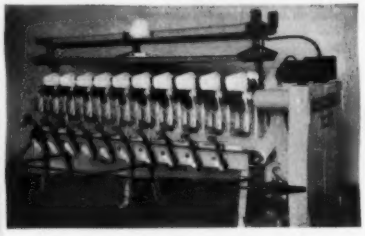


YOUR OPERATORS WILL PREFER THE ROTO-CONER*



Important factors--today--in machine selection:

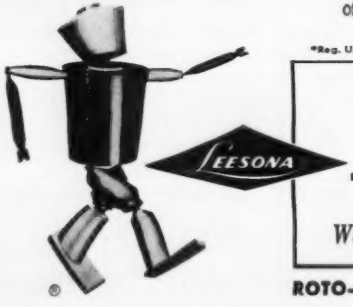
CLEANLINESS The broad flat surfaces of the Roto-Coner* are easy to keep clean—present few places for lint to collect. Smooth action of rotary traverse on yarn eliminates chafing and reduces lint.

QUIET RUNNING No nerve-racking clatter of cams and guides with the Roto-Coner*—just the soft hum of the rotary traverse.

CONVENIENCE Every motion the operator has to make is easy. Supply shelves are within easy reach. The starting handle can be depressed with a touch of the finger. Threading is simple.

So the Roto-Coner* is the choice of operators . . . also the choice of mill owners who appreciate the high speed, versatility, high-quality production and low maintenance of the Roto-Coner*.

*Reg. U. S. Pat. Off. 23.1.7



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LETTERS FROM OUR READERS

Address all communications to:

Editor, *Round Table*, TEXTILE WORLD
330 West 42nd Street, New York 18, N. Y.

Round Table

MORE DOFFER DATA

Dear Editor:

The following observations may be of interest to the card-room overseer located somewhere in Georgia who was wondering about correct doffer speeds [Round Table, Mar., '51, p. 175].

I often wonder if the cotton card is doing its duty in most mills. If not, why not? The answer is that the chief cause of doubt is in the speed of the doffer.

Over 50 years ago, most cotton-card builders adopted the following rule, which holds good for all classes of work: The more rapidly work can be run on a card, consistent with the quality or grade of work required, the stronger will be the yarn and the smaller the amount of good fibers found under the cylinder screen.

To illustrate the thinking, let us assume that the doffer clothing has 86,400 points to the square foot and that it revolves 6½ rpm. If the doffer is speeded to 13 rpm., the number of points acting on the surface of the cylinder is doubled.

It follows therefore that the doffer has double the opportunity of stripping good fibers from the cylinder, doesn't it? And by weighing the droppings from under the cylinder screen, a card-room supervisor will find that he can with a high-speed doffer get a minimum of droppings with long fibers.

Before the year 1910, it was common to find card slivers weighing 60 to 75 grains to the yard. Today very few cotton mills run a card sliver heavier than 50 to 55 grains per yard.

WILLIAM SHAW

Providence, R. I.

LILLE TEXTILE SHOW

Dear Staff:

I arrived safely in France after an uneventful plane ride across the Atlantic.

One of the impressive things about the Lille Show is the fact that the Germans are definitely back in the textile-machinery business.

The foreign (to France) exhibits of machinery are housed in a roofless building at the back of the Exposition quadrangle in a shell called Palais D. It is possibly a fourth or fifth the size of the Atlantic City Auditorium. Exhibitors include manufacturers from the United States, Germany, Switzerland, Japan, Denmark, Hungary, Spain, and Czechoslovakia.

Three countries take up most of the space: The U. S. in the center, Germany at one end, and Switzerland at the other.

Whitin's comber and Draper's looms are attracting a great deal of attention. Other high-spots include Reiter's roving and drawing frames, Saurer's new terry-cloth looms, Ruti's looms, Zellweger's (Uster's) yarn testers, and Schweiter's winders. The German exhibit is the most inclusive as the German makers are showing machines for nearly every mill process.

See you all soon.

P. M. THOMAS
Editor, TEXTILE WORLD

Lille, France

NEW THERMAL UNIT

Dear Editor:

It was not until World War II that the importance of measuring the thermal efficiency of clothing was fully appreciated in Canada. During that period a new unit called "the clo" was coined to express in simple terms the efficiency of a textile material in retaining warmth.

The term "clo" thus avoided the use of the scientific unit for insulation value, "calories per second per square centimeter per degree Centigrade temperature difference," as well as the equally cumbersome alternative, "British thermal units per hour per square foot per degree Fahrenheit temperature difference," that is used by engineers.

The "clo" is roughly a measure of the amount of clothing insulation that a normal resting man finds comfortable in an environment of 70° F. with a relative humidity of 50% and an air movement of 10 ft. per min. If a fabric, when placed on the apparatus, transfers only half the amount of heat that a "one clo" cloth

TEXTILE TICKLES . . . . . By Edgar Allen, Jr.

"Well, you said to design a package that would appeal to men!"

would transfer under similar circumstances, the fabric is said to have an insulation value of 2 clos, or twice the insulating value.

It would be of immense value to all consumers to know how the material in one winter garment compares with that in another, insofar as preventing heat loss is concerned. The study of insulation values in clothing is quite as important as the study of heat losses in buildings.

RAY CARMICHAEL

Montreal, Que.

APPRECIATIVE ECA TRAINEE

Dear Editor:

I am from Holland, a textile-engineering graduate visiting in your country to study production methods, materials handling, and management. This in-plant training program is sponsored by your government in its Technical Assistance program.

I want to tell you that all the men from our group (15 of us) appreciate very much your monthly magazine. It really helps us in becoming familiar with a lot of very interesting subjects in the textile industry in your country.

F. J. E. BANNING

Mt. Holly, N. C.

AUSTRALIAN FRINGE BENEFITS

Dear Editor:

There is a Belgian textile-mill executive by the name of Roger de Stoop who has come to Australia with plans to make a workers' paradise of the mill he is setting up near Melbourne.

His workers are to have a committee to advise the management on factory organization and working conditions. He will employ a full-time social worker for his staff, and a model housing settlement is to be built on the site. A cooperative shopping center, a well-staffed kindergarten, and recreation and community facilities, including a swimming pool, are to follow later.

Australian factory executives say they have tried some or all of these paradise amenities before without licking Australian absenteeism and labor turnover.

But a really new idea has been introduced by a prominent hosiery manufacturer. Women operators in the two Melbourne mills are being taught to be happy and glamorous outside the mill. Beauty experts, fashion specialists, the director of a model academy, and a physical-culture expert are retained to teach the girls the art of make-up, graceful deportment, attractive dressing, and physical fitness. Lectures on personality development, home budgeting, and culture are also part of the program.

Do you have any such factory-sponsored extra-curricular activities in the States?

"AUSSIE"

Melbourne, Australia.

LABOR-TURNOVER CAUSES

Dear Editor:

Mill men should beware of the worker now on a job requiring less than his full ability and paying less than his top earning power. He has nothing to lose when he leaves the mill for something better. Upgrade him when you can. Meanwhile, let him know you have an eye on him and his work.

Mill men should beware of the employee with no roots in the community. Without a local reputation to live up to, he has nothing to lose through criticism, and you cannot make him a better worker through appeal to his pride. Encourage men to buy their own homes, take an interest in community affairs, and be proud of their children's activities in school.

Mill men should beware of anyone on the payroll who has nothing financially substantially to show for his years of employment. Remember that he very likely blames this on management rather than on his lack of thrift. Alert employers are beginning to see that any move intended to help employees create a savings backlog is actually the best of morale builders.

Mill men should beware of the resentful helper who feels he has never been fully appreciated. It's easy for him to convince himself that he has nothing to lose by leaving the mill, and he may particularly delight in doing so when manpower is tightest. If you cannot find anything in a man's efforts worthy of a compliment, he may be too poor a worker to retain. But, more often, perhaps management has merely failed to try to understand his need of appreciation.

Mill men finally should beware of the man who has nothing to lose. And then hasten to give him at least one specific reason for thinking, "I cannot afford to quit my job here. In a very personal way, I have too much at stake."

GEORGE M. DODSON

Harrisburg, Pa.

TEST YOUR TEXTILE IQ

▶ Each correct answer rates 10 points. A total of 70 is passing; 80, good; 90, excellent; 100—you're a genius! Key to answers is on page 174.

1. The key point for size control in the card room is at the:
   a. pickers c. drawing frames
   b. cards d. roving frames

2. The length of sliver and roving tested for evenness is usually:
   a. 5 yd. c. 50 yd.
   b. 10 yd. d. 100 yd.

3. According to TOE of Ga., pickers should be overhauled once every:
   a. 3 to 6 mo. c. 12 to 18 mo.
   b. 6 to 12 mo. d. 18 to 24 mo.

4. With a 14-in. can, mills report increased sliver in can by:
   a. 1 to 5% c. 20 to 30%
   b. 10 to 20% d. 40 to 50%

5. The most desirable relative humidity for carding wool ranges from:
   a. 40 to 50% c. 50 to 60%
   b. 80 to 90% d. 60 to 70%

6. The key factor in the package-dyeing of continuous-filament rayon is:
   a. correct winding c. *size of package*
   b. dyeing time d. *finishing*

7. One of these items is not a cause of tangled yarn:
   a. base rail out of line c. worn builder
   b. can stud loose d. cap bar worn

8. Homogenized size will help slashing and weaving because it will:
   a. improve fiber lay c. retain less elongation
   b. give more rigid fiber bonding d. pick up less size

9. A card flat is loaded when it reaches the position of the:
   a. 3rd flat c. 10th flat
   b. 7th flat d. 15th flat

10. A change of 1,000 psi. in tensile strength of fiber usually shows what change in strength of 22s yarn?
    a. 0.27 lb. c. 1.24 lb.
    b. 0.86 lb. d. 2.48 lb.

CANADIAN READER APPROVES

Dear Editor:

We always find TEXTILE WORLD good and instructive, but your May issue was unusually good, and we wish to congratulate you on it.

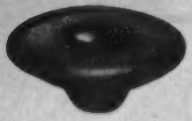
CANADIAN

Welland, Ont.

[*It was very kind of you to write us and express your approval of the May issue. We are always striving for improvement and hope that future issues will merit your approval also.*—EDITOR]

REINER

Robert Reiner, Inc.
Weehawken, New Jersey



Reiner No. CR 1803
AlSiMag No. GE-19123

Reiner No. CR 1804
AlSiMag No. GE-19122

Reiner No. CR 1805
AlSiMag No. GE-19121

Reiner No. CR 1806
AlSiMag No. GU-8146-D

Reiner No. CR 1807
AlSiMag No. GE-21111

Reiner No. CR 1808
AlSiMag No. GE-22260

Reiner No. CR 1813
AlSiMag No. GE-22259

• All Reiner Guides stocked in AlSiMag 193

COCKER

Cocker Machine & Foundry Co.
Gastonia, N. C.

Guide No. GE-17204
Stocked in AlSiMag 192

Guide No. GE-18398
Stocked in AlSiMag 192

Guide No. GU-18462
Stocked in AlSiMag 193

Guide No. GE-22048
Stocked in AlSiMag 193

Guide No. GE-22784
Stocked in AlSiMag 192

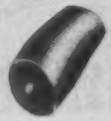
Guide No. GE-22785
Stocked in AlSiMag 193

SIPP-EASTWOOD

Sipp-Eastwood Corporation
Paterson 4, New Jersey

Sipp-Eastwood
No. C-13081
AlSiMag No. GU-16656

Sipp-Eastwood
No. FG-1103
AlSiMag No. GE-17091



Sipp-Eastwood
No. C-13065
AlSiMag No. GU-10748

Sipp-Eastwood
No. C-13070
AlSiMag No. GU-10748-A

AlSiMag No. GE-14507-L
Not stocked by
Sipp-Eastwood

• All Sipp-Eastwood Guides stocked in AlSiMag 192

AlSiMag® Guides for Creeling and Warping

These AlSiMag Guides are carried in stock for immediate shipment by the respective companies except as noted. Any of these guides may be ordered from American Lava Corporation, Chattanooga 5, Tennessee, in any of the three AlSiMag materials for delivery from normal production schedules.

ADVANTAGES

ECONOMY. These AlSiMag guides have established new low cost records per pound of yarn processed. In some instances, the cost is as little as one-twentieth of former guide costs.

QUALITY. AlSiMag is a smooth, homogeneous material of extreme hardness.

UNIFORMITY. AlSiMag guides are uniform both physically and dimensionally.

BETTER YARN CONTROL. Smoothness, uniformity and perfected designs of AlSiMag guides give better yarn control.

MATERIALS

These AlSiMag guides are available in three materials:

ALSIMAG 192
(considered standard) A non-conductor of electricity. Hardness of 8 on Mohs' scale. Gives exceptionally long life on most requirements. Ivory color.

ALSIMAG 193
A conductor of electricity, used for dissipating static charges. Metallic gray color. Otherwise it is identical to AlSiMag 192.

ALSIMAG 491
Super hard, highly resistant to cracking, chipping. Great mechanical strength. Hardness of 9 on Mohs' scale. Its cost is justified where excessive wear is experienced or where satin finish must be maintained under severe conditions. Light blue color.

AMERICAN LAVA CORPORATION

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Exploring **THE TEXTILE COMMUNITY**

By MILDRED BARNWELL ANDREWS

OPEN HOUSE:
The Way to an Open Heart

If you haven't tried holding an Open House in your mill, you may be missing an easy opportunity to improve your relations with the community and with your employees. Here's an inexpensive way to show the public how your plant operates and what it has to offer.

MILDRED ANDREWS

"I'll never again feel sorry for anyone who works in a textile mill. I'd rather have any one of the jobs I've seen today than look after the forty-three little squirmers I have in my fourth grade." "Well, me too• And I thought I had an easy job." The high heels of the two young women clicked down the sidewalk as they swapped comments on the mill's open house they had just attended. "Look at that," said one, pointing toward the parking lot where a hundred or more nice cars were neatly parked. "Look at that—mill workers drive their own cars to their jobs, but you and I have to catch the nearest bus to get to our work. And, gosh do my feet hurt!"

"I'll tell you, Suzie, I sure have had my eyes opened today," said the other as she viciously dabbed a little powder puff at her shiny nose. Down the street and out of earshot they went, but I could tell by their animated gestures they were still talking about the open house and what they had seen, and what it meant to them to see it.

Many thousands of people in many walks of life have been equally impressed by trips through textile plants as, from time to time, mills open their doors to visiting groups. It is one of the easiest and one of the most impressive ways to tell others of the work conditions and of the job opportunities in textile manufacturing. Open house once a year and every year is not too often for the excellent result obtained in community good will and understanding.

Of course, there are many ways in which the open house may be planned or arranged. Some managements prefer to run the program through local civic clubs, with Rotary, Kiwanis, Civitan, Lions, or others sponsoring the event and acting as hosts, but with all expenses paid by the mills. Other mill executives have invited special leader groups in the community, such as members of the ministry, or the press and radio, or members of the parent-teacher associations, to attend their open houses from time to time. Some mills see that certain school classes are invited to visit the mills each year. Others have Family Day. Workers who can show their wives and mothers, fathers and uncles, aunts and cousins, and their children "where I work," or have them "meet the boss" or "Joe, who runs the machine next to mine", get a boost in morale that can only be derived from great pride in their company and what it stands for.

One of the best open-house affairs I have attended included every essential for success. Careful planning of details weeks in advance and sufficient publicity, both before the big day and as follow-up once it was over, plus flair for the proper amount of showmanship made it almost a community holiday. It was local conversation for weeks afterward and hailed as an outstanding event. The mill sent special invitations to leaders of the city and of the county and state. Newspaper ads invited the public to "come one, come all." Across the nearby main highway, a huge banner was flung inviting the visiting stranger to "stop by to see us." Thousands of people went through the mill in just a few days, many of them from far-away states.

There they saw an extensive exhibit of the mill's finished products. Specially trained guides were ready to take small groups through the plant on a tour which lasted about an hour and a half, from opening room to packing room and shipping platform.

Each visitor was given a well-prepared leaflet that contained the tour routing and special things to look for. Arrows throughout the mill pointed the way and signs identified the various machines and other equipment, as well as material in process. Souvenirs that were attractive enough to serve as conversation pieces when the visitor was back home were given out. And, just halfway on the tour, there was a stop-over for a rest at the snack bar.

There are many ways in which an open house may be pointed up. One mill has a group of specially trained and beautifully costumed young ladies who act as hostesses. This added touch, in addition to the well-rehearsed guides who conduct tours, gives the visitor a feeling of welcome and lends a sort of hospitality to the occasion far above the usual tour. Another mill president stood by the door and bade farewell to each guest, inviting them to come again sometime and chatting with them as they left the plant.

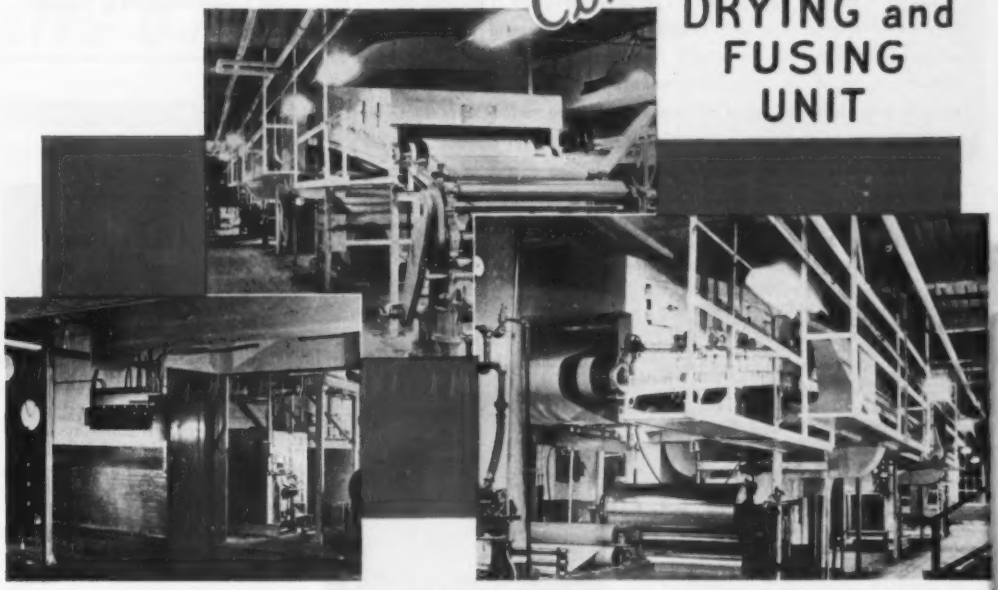
An open house need not be an extravagance. One mill, which invited small leader groups, served lunch, and gave souvenirs of the mill's products, figured its cost at $2.12 a visitor. Another corporation with several plants in widely separated territories said its cost per visitor ranged from 57 to 70¢ at its several open-house parties, and its cost included everything: booklets, invitations, postage, refreshments, plates and cups, etc. Another mill figured soft drinks and cookies alone cost about 9¢ a person.

But whatever the cost, it is small when allocated over the years and one which may bring a tremendous return in open heartedness. As one minister said afterward, "Now I can talk with those people, instead of just preaching to them."

RESPRO INC., *Cranston, R.I. completes*

3 drying operations with their new

ROSS *Combination* DRYING and FUSING UNIT



Three views of Respro's single Ross Dryer and Fusing Unit: Top, entering end; left, dryer with controls; right, arched section and conveyor belt.

As would be expected, Respro Inc. utilizes the most efficient type of processing equipment for producing the famous "Resproid" plastic sheeting. Their new Ross Dryer is designed to perform three operations—(1) drying of printed plastics,—(2) drying and fusing of organosol coatings on cloth,—(3) drying and fusing of plastisol coatings on cloth. For organosols the arched unit shown above is used 50% for drying and 50% for fusing. For plastisols it is used 25% for drying and 75% for fusing. Another striking example of how Ross Engineering is increasing drying efficiency with better designed and built drying units.

ROSS RS SYSTEMS

J. O. ROSS ENGINEERING CORPORATION

MANUFACTURERS OF AIR PROCESSING SYSTEMS

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201 N. Wells Street, CHICAGO-6 • 79 Milk Street, BOSTON-9 • 9225 Grand River Avenue, DETROIT-4 • 600 St. Paul Avenue, LOS ANGELES-17
ROSS ENGINEERING OF CANADA, LIMITED, MONTREAL, CANADA • CARRIER-ROSS ENGINEERING COMPANY, LIMITED, LONDON, ENGLAND

Pointers FOR SUPERVISORS

How the Management Team Can Build Better Human Relations

Why Not Evaluate Your Suggestion System?

► *Do you know how your company's personnel program is working out? The success of your production-, quality-, and cost-control programs can be measured by scientific yardsticks. Yardsticks should also be developed to evaluate some of the items that make up a sound personnel plan. From time to time, this column will discuss some of the methods developed in the personnel field which some executives call "personnel controls." Here's a dollar-and-sense way to measure progress in one aspect of your personnel participation.*

By PAUL A. KING
Assistant to Vice President for Personnel, Bigelow-Sanford Carpet Co., Inc.

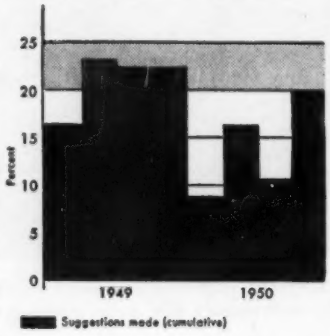
First, let's take a look at your suggestion system. Many companies have such systems, and those that do spend time and money trying to put them over. How successful have these efforts been?

The requisite of a suggestions-plan control—as in any other statistical control—is a standard. Out of every ten suggestions made, perhaps only two or three may result in awards. But what is the normal expectation?

One textile company set up a standard after examining the experience of about 20 companies in a variety of industries. This company found that between 20 to 25% of the suggestions made by employees of these firms resulted in awards. Therefore, it used this percentage as a norm, with the thought in mind that, as it secured experience with the administration of its own suggestion system, it could revise the standard upward or downward as needed. At least, it was something to shoot at.

The company then created a chart (Fig. 1) on which it plotted percentages of suggestions that resulted in awards on a quarterly basis for each year. Plotting of results was on a cumulative basis so that the figure for the last quarter indicated that figure for the entire year. It was felt that by plotting on a quarterly cumulative basis, a fairer measurement would result, because suggestions made one month might not be examined and acted upon until the following month. A dotted area on the chart (between 20 and 25%) indicated the normal. At a glance, any company executive could get from the chart an idea of the quality of the suggestions.

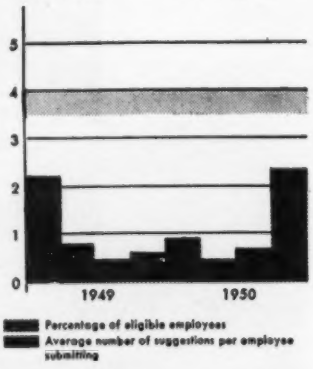
Fig. 1. Suggestions Resulting in Awards



If the norm on such a chart is not reached, two conclusions are possible: the ideas submitted by the employees are poor, or the examiners are too tough. A sampling of ideas rejected by the examining committee may furnish the executive with the answer.

A second chart was developed (Fig. 2) to show the number of suggestions made by eligible employees. The first chart mentioned might show that the suggestions are of high quality, but the second chart may prove that very few suggestions are offered. The norm for suggestions contributed was, in this case, between 3.5 and 4% of eligible employees.

Fig. 2. Suggestions Made by Employees



In the hypothetical case on the chart, the company is not up to the norm. It may because of the nature of the textile processes, or it may be that the plan is not very popular. In any event, something is wrong. More or better promotion is needed. Or it may be that the reviewing committee is so tough that employees are discouraged from participating in the plan. A low figure on the award chart will reveal such a situation.

Notice that the number of employees making suggestions as a percentage of employees eligible is charted, as well as the average number of suggestions made per employee. The difference between the two figures will help show whether only a few employees are making most of the suggestions or whether participation is widespread. Good participation, of course, is preferable to suggestions by just a few active employees.

Employees are often discouraged from participating in a suggestion system because of a great delay between the time that the suggestion is made and the time it is acted upon. The

(*Continued on page 273*)

Booth

Originators of **STRIP-O-MATIC** *

CARD CLOTHING NEWS AND VIEWS

PROMINENT PHILADELPHIA MANUFACTURER CUTS STRIPPING WASTE BY ⅔ WITH STRIP-O-MATIC CARD CLOTHING

The Continental Mills[illegible]nent Philadelphia woole[illegible]turer, has reduced stripping [illegible] more than 2/3 on the breakers they have equipped with Strip-O-Matic* Card Clothing. Continental has been testing Strip-O-Matic for over a year on first-breaker and second-breakers. They do not, however, have a complete set equipped with Strip-O-Matic, so since stripping is required anyway, Strip-O-Matic is usually stripped right along with the other clothing. However, Mr. Charles Messa, carding superintendent, anticipates a considerable saving in down time as complete sets are clothed in Strip-O-Matic; a very considerable saving in stripping waste has already been realized which is especially important with today's high woolen [illegible]mental runs a variety of [illegible]ding fleece and top, as well as [illegible]etics. In Continental's experience it is frequently possible to skip stripping with Strip-O-Matic as often as two out of three times compared to the conventional clothing.

Note Small Amount of Trapped Stock After 48 Hours Continuous Operation: The clothing is easily cleared with a single pass of the vacuum head.

Nylon card after nine months operation. Note complete absence of trapped stock.

New Type Card Clothing Proved in Mill Operation

Strip-O-Matic Card Clothing in the last two years has been put to work in more than 200 textile mills, carding practically all textile fibres. The following reports from pleased users are typical.

Color Lots Are Run Complete without stripping. Many modern carpet plants are able to run up to six weeks without stripping. With the conventional clothing that Strip-O-Matic replaced, stripping was necessary every day or two.

Savings Up To $1,000 per Year by eliminating waste stock in stripping from a Strip-O-Matic equipped breaker card, are reported by a prominent Canadian Mill.

Performance Record. A finisher card with conventional clothing ran 24 hours —stripped 2 lbs. waste. A finisher with Strip-O-Matic ran twelve days (24 hours per day)—stripped 6 oz. Carding was excellent, good web, no fibre damage—saving $170 on one finisher in 12 days.

Typical User Comments: Less Fly, Greater Strength, Greater Production, Less Shrinkage, Better Quality, Stripping is Easier; Working well on 70 wool.

A Benjamin Booth representative will be glad to call to help you achieve similar results with Strip-O-Matic.

* Patented ®

Sincerely yours,

E. Allen Snape Jr

PRESIDENT

Established 1892

Booth

BENJAMIN BOOTH COMPANY, ALLEGHENY & JANNEY STS., PHILA., PA.

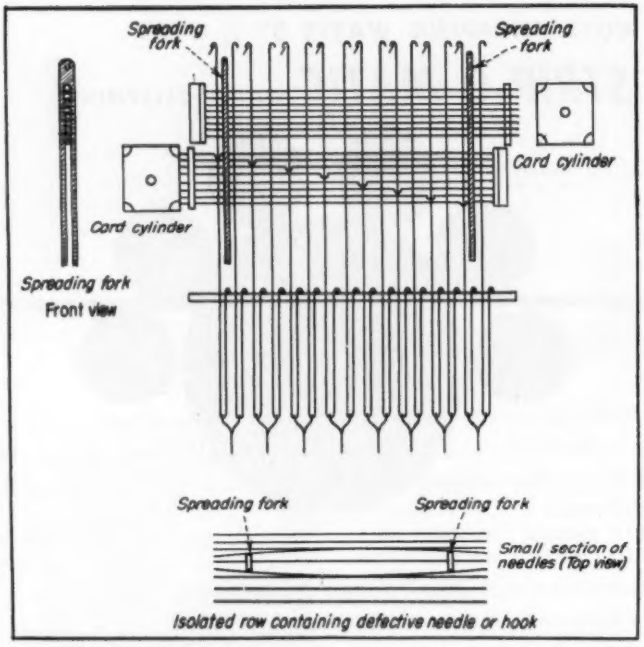
Kinks AND SHORT-CUTS

Device Helps Us Remove Jacquard Needles

We made two spreading forks from ⅛-in. flat-bar mild steel. The dimensions of the fork would have to correspond to the dimensions of your particular jacquard heads. The main points to watch are that the legs of the fork should be long enough to hang down both sides of a row of needles and the width of the forks should be just a little larger than the distance between two rows of needles.

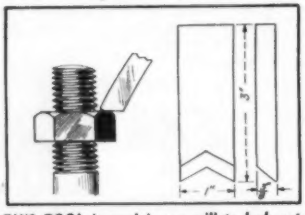
Here's how we use these forks. If we must replace a worn needle or hook, we carry out all of the normal preliminaries. We insert the forks with the prongs straddling the defective row. The row on each side of the defective row is then slightly deflected outward, and the defective row is isolated from them. We now have easy access to the defective row.

We find these devices very valuable for use on fine-pitch jacquards, where the head appears to be a solid mass of hooks and needles. We do not use the forks for the top row of needles because the crook of the forks rest on this row. The top row is fairly accessible without the forks.



SPREADING FORKS, shaped like outsized tuning forks, help us isolate a row of needles or hooks for easier removal and replacement. Two spreading forks are normally used, but only one fork need be used if you are adept with it.

Tool Keeps Nuts From Loosening



THIS TOOL is used in our mill to lock nuts in place and keep them tight. We use it when lock washers are not used on the bolts. It can be made from any piece of hardened-steel stock. Grind the end of the tool to the shape shown in the diagram.

Here's how it works. Hold the tool with the tapered end resting on the nut and against the bolt threads. Be sure that the bolt is in the center of the V-shaped notch. Tap the tool on top lightly with a hammer. This action will spread or flatten the threads on the bolt slightly and cause the nut to be locked in place. It will not loosen because of vibration, and the threads are not damaged in any way.

The nut can be removed with a little more than normal effort. The threads on the inside of the nut act as a die to restore the bolt threads to their original condition. The V-shaped notch makes it easy to hold the tool in this proper position and guides the tapered ends against the threads.

Device Controls and Winds Jacquard Needles

To take care of our spare warp ends, we rigged up the device that is shown on next page. It consists of a selvage bobbin supported on a mild-steel bar, that is shaped to bolt on to the loom frame. We usually place it somewhere above the crankshaft. The bobbin is free to rotate on its axis, and it is driven by the crankshaft with a piece of loom cord. The cord is tied around the groove of the selvage bobbin and around the crankshaft. The groove in the bobbin may have to be deepened and widened to accommodate the knot

poor sizing?

weavability?

irregular finishing?

stuck with starch problems?

IT COSTS YOU NOTHING TO HAVE THE ASSISTANCE OF A SKILLED STALEY STARCH TECHNICIAN!

More and more smart textile men are dodging trouble by turning their starch problems over to a Staley Starch expert. AT NO COST TO YOU . . . a Staley technician will help you *improve present methods* . . . show you *new* and *better operational procedures* . . . tell you which in the complete line of superior Staley Starches is best for *your* particular needs. Keep your plant at peak production during these periods of extreme demand. Write for the important facts this very day!

Staley Starches

A. E. STALEY MFG. CO., Decatur, Ill.

Dependable Service from these points:

Atlanta, Ga.	Dallas, Texas	New York, N. Y.
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Columbus, Ga.	Greenville, S. C.	Spartanburg, S. C.

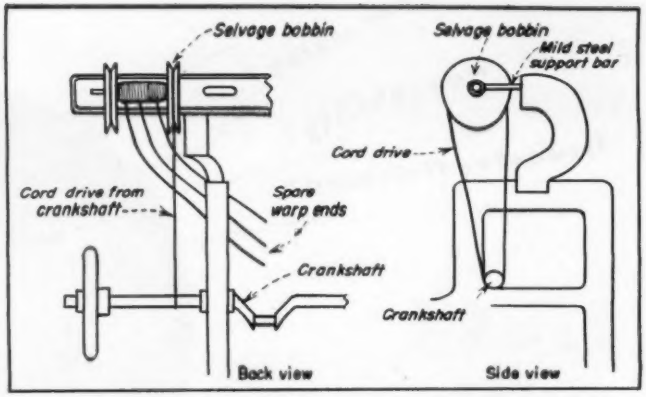
For more information, write direct or use Reader Service post card.

in the cord, and to prevent the cord from slipping off.

We get our spare ends together and guide them onto the bobbin through different holes in the loom frame. When the bobbin starts winding, the weaver does not have to touch it again until it is full and needs to be stripped.

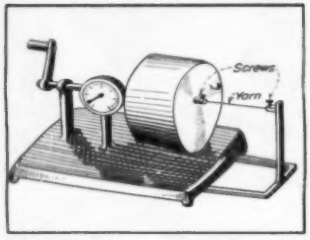
The speed of the drive will be too fast for the yarn delivery, but the cord drive will slip on the crankshaft and bobbin. This arrangement furnishes enough tension to take up the yarn as it is let off the warp beam and keeps it under control.

To help strip the bobbins, we made one end of each bobbin detachable. We sawed off the flange and fixed it back with two wood screws. When the yarn needs to be stripped off the bobbin, we remove the detachable flange and slide the yarn off the end.



A SELVAGE BOBBIN mounted on the loom frame and driven by the crankshaft will take up ends as they are let off the warp beam and relieve the weaver of much trouble.

Roving Reel Used as Twist Tester



OUR ROVING REEL does more than reel off roving. We welded an extension of flat iron onto the base of the reel and ran a rod up to a point on line with the center of the reel. We put screw attachments on the hub of the reel and on the extension to hold the ends of roving or yarn. Now we have a twist tester.

We made our extension out 3 in., but you can make it any length that you want. To check the twist, fasten each end of the yarn in place, note the reading on the clock, and turn the handle of the reel. You can read the turns in your length of yarn off of the clock. Divide by the length in inches between the two yarn holders and you have the turns per inch in the roving or yarn. J. B. Boyter, Albertville, Ala.

Waste Reworked With Home-Made Lickerin

If roving or stick waste is to be reworked and run into your blend or sold as good-quality waste, it must be reworked so that the cotton is not damaged. We made a lickerin to replace the beater in a picker and ran our roving and stick waste very successfully. The core of the lickerin can be made of any suitable material, and regular fillet can be wound on it. The diameter of the completed lickerin should be the same as the diameter of

$200 for Best Kink in 1951
$25 for Best Kink Each Month
In Addition to Space Payment on Acceptance

You undoubtedly know of many kinks and short cuts that are helpful to mill operators. Write them down and send them in. We pay promptly on acceptance—before publication. In addition, your kink may win the $200 check for the best kink of the year or the $25 check for the best kink of the month, maybe both!

Send in your kink now. There is always a contest going on. The more good kinks you send in, the better your chances of winning a prize in addition to earning some easy money for every kink accepted.

We will polish up your writing and will have an artist make finished drawings. But send in plenty of details so that your kink can be clearly explained. Be sure your sketch is clear and well labeled, but it need not be a polished job. Best of all, send us a good glossy photograph of it—we will pay you extra if you do and we can use it.

Look over the kinks in this and other issues. You will get ideas you can use as well as inspiration for kinks you send in. We like items that pertain to ways for improving machines, new devices that a mill man can build, attachments or methods of merit—anything that will cut costs, improve quality, or help production.

Your published kink will be judged impartially by other mill men. In case of ties, duplicate prizes will be awarded.

RULES OF CONTEST

1. No limit to number of entries.
2. New $25 prize contest every month, $200 prize contest for the year. Monthly contest confined to kinks published that month, yearly to those published in calendar year 1951.
3. All kinks paid for on acceptance; extra payment for photographs. Drawings need not be finished (clear detailed pencil sketches will do).
4. Previously published material not eligible for prizes.
5. Unless you advise to contrary, we assume we may sign your name to kink when published.
6. Prize winners will be selected by readers, a different group each time. At least 200 will be asked to select preferred kinks in each issue. Their votes will select the best kink, and their decision will be final.

Send kinks to whichever address you prefer:

TECHNICAL EDITOR, TEXTILE WORLD
330 W. 42d St., New York 18, N. Y.

SOUTHERN EDITOR, TEXTILE WORLD
367 Ridgewood Ave., Charlotte, N. C.

NEW ENLAND EDITOR, TEXTILE WORLD
P. O. Box 305, Salem, Mass.

"STANDARD" recommends STANDARDS*

UNBRAKO®

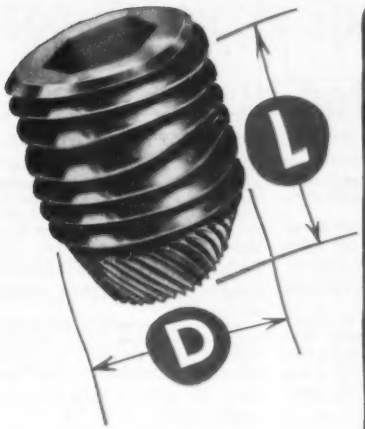
SELF-LOCKING SOCKET SET SCREWS

(WITH KNURLED CUP POINT)

STANDARD SIZES

Sizes preceded by asterisk (*) available in both National Coarse and National Fine Threads

Class 3 fit is an "UNBRAKO" standard



D Diameter	Threads per inch NC	Threads per inch NF	L Overall Length	Price per 100	Quantity per box
#4 (.112")	40	48	* 1/8	3.95	100
	40	48	* 3/16	4.00	100
	40	48	* 1/4	4.05	100
	40	48	* 5/16	4.10	100
	40	48	* 3/8	4.20	100
	40		7/16	4.40	100
	40		1/2	4.70	100
	40		5/8	5.00	100
#5 (.125")	40	44	* 1/8	4.00	100
	40	44	* 3/16	4.05	100
	40	44	* 1/4	4.10	100
	40		5/16	4.15	100
	40		3/8	4.25	100
	40		7/16	4.45	100
	40		1/2	4.75	100
	40		5/8	5.05	100
	40		3/4	5.35	100
#6 (.138")	32	40	* 1/8	4.05	100
	32	40	* 3/16	4.10	100
	32	40	* 1/4	4.15	100
	32	40	* 5/16	4.20	100
	32	40	* 3/8	4.30	100
	32		7/16	4.80	100
	32		1/2	4.80	100
	32		5/8	5.10	100
	32		3/4	5.40	100
	32		7/8	5.70	100
	32		1	6.00	100
#8 (.164")	32	36	* 1/8	4.10	100
	32	36	* 3/16	4.15	100
	32	36	* 1/4	4.20	100
	32	36	* 5/16	4.25	100
	32	36	* 3/8	4.35	100
	32		7/16	4.55	100
	32	36	* 1/2	4.85	100
	32		5/8	5.15	100
	32		3/4	5.45	100
	32		7/8	5.75	100
	32		1	6.05	100
#10 (.190")	24	32	* 3/16	4.20	100
	24	32	* 1/4	4.25	100
	24	32	* 5/16	4.30	100
	24	32	* 3/8	4.40	100
	24	32	* 7/16	4.60	100
	24	32	* 1/2	4.90	100
	24	32	* 5/8	5.20	100
	24	32	* 3/4	5.50	100
	24		7/8	5.80	100
	24	32	*1	6.10	100
	24	32	*1 1/4	6.65	100
1/4 (.250")	20	28	* 3/16	4.30	100
	20	28	* 1/4	4.35	100
	20	28	* 5/16	4.40	100
	20	28	* 3/8	4.50	100
	20	28	* 7/16	4.70	100
	20	28	* 1/2	5.00	100
	20	28	* 5/8	5.35	100
	20	28	* 3/4	5.70	100
	20		7/8	6.05	100
	20	28	*1	6.40	100
	20	28	*1 1/4	7.10	100
	20		1 1/2	7.80	100
	20		1 3/4	8.50	100
	20		2	9.70	100
5/16 (.3125")	18	24	* 1/4	4.45	100
	18	24	* 5/16	4.50	100
	18	24	* 3/8	4.60	100
	18	24	* 7/16	4.80	100
	18	24	* 1/2	5.10	100
	18	24	* 5/8	5.50	100
	18	24	* 3/4	6.00	100
	18		7/8	6.50	100
	18	24	*1	7.00	100
	18	24	*1 1/4	7.60	100

D Diameter	Threads per inch NC	Threads per inch NF	L Overall Length	Price per 100	Quantity per box
5/16 (.3125")	18		1 1/2	8.40	100
	18		1 3/4	9.20	100
	18		2	10.50	100
3/8 (.375")	16	24	* 1/4	4.55	100
	16	24	* 5/16	4.60	100
	16	24	* 3/8	4.70	100
	16	24	* 7/16	4.90	100
	16	24	* 1/2	5.20	100
	16	24	* 5/8	5.60	100
	16	24	* 3/4	6.20	100
	16		7/8	6.80	100
	16	24	*1	7.40	100
	16	24	*1 1/4	8.20	100
	16		1 1/2	9.20	100
	16		1 3/4	10.50	100
	16		2	12.50	100
	16		2 1/2	14.50	100
7/16 (.4375")	14	20	* 3/8	5.90	100
	14	20	* 7/16	6.10	100
	14	20	* 1/2	6.40	100
	14		5/8	6.80	100
	14		3/4	7.40	100
	14		7/8	8.00	100
	14		1	8.70	100
	14		1 1/4	9.50	100
	14		1 1/2	11.00	100
	14		1 3/4	12.50	100
	14		2	14.00	50
	14		2 1/2	16.50	50
1/2 (.500")	13		3/8	6.90	100
	13		7/16	7.10	100
	13	20	* 1/2	7.45	100
	13	20	* 5/8	7.80	100
	13	20	* 3/4	8.40	100
	13		7/8	9.00	100
	13	20	*1	9.70	100
	13		1 1/4	10.50	100
	13		1 1/2	12.00	100
	13		1 3/4	13.50	50
	13		2	15.00	50
	13		2 1/2	17.50	50
	13		3	20.00	50
5/8 (.625")	11		1/2	9.90	100
	11	18	* 5/8	10.30	50
	11		3/4	10.90	50
	11		7/8	11.50	50
	11	18	*1	12.50	50
	11		1 1/4	13.50	50
	11		1 1/2	14.50	50
3/4 (.750")	10		5/8	12.80	50
	10		3/4	13.40	50
	10		7/8	14.00	50
	10		1	15.00	50
	10		1 1/4	16.00	50
	10		1 1/2	18.00	50
	10		1 3/4	20.00	50
	10		2	23.00	25
	10		2 1/2	27.00	25
	10		3	31.00	25
7/8 (.875")	9		3/4	17.00	25
	9		7/8	18.00	25
	9		1	20.00	25
	9		1 1/4	22.00	25
	9		1 1/2	25.00	25
	9		2	29.00	25
	9		2 1/2	34.00	25
	9		3	39.00	25
1 (1.000")	8		1	23.00	25
	8		1 1/4	25.00	25
	8		1 1/2	28.00	25
	8		1 3/4	32.00	25
	8		2	36.00	25
	8		2 1/2	42.00	25
	8		3	48.00	25

Prices subject to change without notice.

LIST PRICES SUBJECT TO DISCOUNT

The unique, counter-clockwise *knurls* on the UNBRAKO Cup Point make these screws *self-locking*, prevent "creep" and subsequent loosening. And, UNBRAKO Set Screws with the Knurled Cup Point "stay put" even in poorly tapped holes — an important factor in reducing machinery stoppage and production losses.

★ One of a series listing *Standard* UNBRAKO Socket Screw Products sold by your local UNBRAKO Distributor. If you want reprints of this and other advertisements in the series, ask for them on your business letterhead.

SPS

STANDARD PRESSED STEEL CO.

JENKINTOWN 35, PENNSYLVANIA

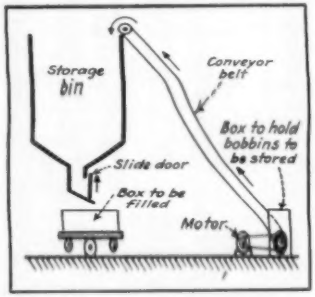
Most tapped holes are *standard*, why specify "special" screws? Use UNBRAKO *standards!*

the picker beater on your machine.

At the end of the week, we would remove the blade-beater from the picker and put in our home-made lickerin. Of course, the shaft of the lickerin must be exactly the same size as the beater shaft. No change in speeds is necessary unless the stock is carried around by the lickerin. If that happens, either lower the speed of the beater, or increase the speed of the fan.

We mixed this waste with our regular mix and got good results. Some of the waste was sold to art-metal shops for polishing waste. William Shaw, Providence, R. I.

Storage Bin for Bobbins
Designed To Save Space



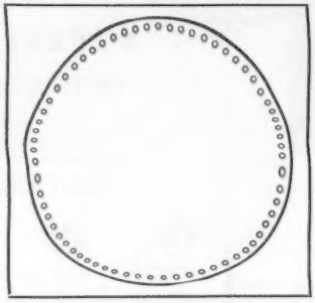
THIS STORAGE BIN can be used to store empty bobbins of any kind or wooden tubes used on Abbott winders. Empty bobbins are dumped onto the bottom of the conveyor and are carried up the conveyor into the storage bin. Whenever empty bobbins are needed, the slide door at the bottom of the bin is pushed up, and the empty bobbins fall out into the box.

With this storage bin, which we call a "space saver," we have eliminated the necessity of tying up boxes full of empty bobbins when they are not in use. When we need empty bobbins, we push a box under the slide door, push up the slide, and the empty bobbins fall out into the box.

Therefore, the only boxes needed for empty bobbins are those required to take the empties to the storage bin and those required to take the empty bobbins from the bin to the machines. The entire unit, except the motor and bottom of the conveyor belt, is hung from the ceiling of our building and takes up floor space of about 3x4 ft. It can be made in any size.

We have found that our empty bobbins stay much cleaner in this type of storage bin, because waste and other surplus items cannot be thrown in with them. W. N. Poe, Talladega, Ala.

You Can Drill Large Holes
With a Small Drill



HERE'S HOW I DRILL large holes with a small drill. If, for example, I want to drill a hole 1¼ in. in diameter with a ¼-in. drill, I mark a circle 1¼ in. in diameter where I want the hole. Then I make punch marks fairly close together around the outside of the circle.

I drill holes with my ¼-in. drill around the circle where I have made the punch marks. I knock out the plug with a hammer or punch and use a file to finish the rough edges.

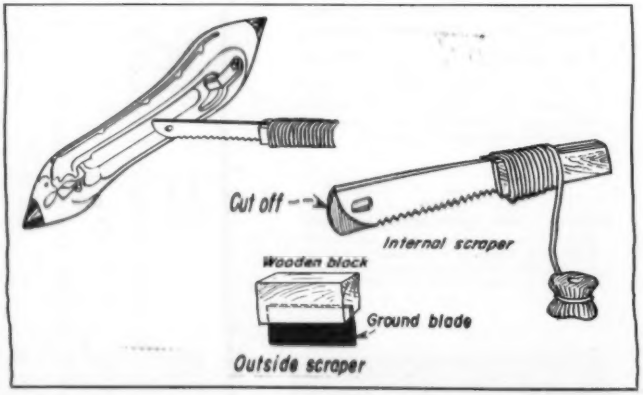
This method is very satisfactory for drilling holes in a metal work-table, machine base, or the cylinder of a machine. I have also been able to use the same method to drill a hole for a metal pipe. Luther J. Keller, Sr., Allentown, Pa.

Colored Boxes Identify
Filling for Weavers

SOME OF OUR WEAVERS occasionally mixed filling when they changed from one filling box to another. To correct this condition, we painted all of our filling boxes and brackets that hold these boxes on the looms. For every six looms we have a bin which holds two spare filling boxes for each loom. Each filling-box bracket on the loom is painted a different color; red, white, blue, yellow, green, and orange.

When a weaver needs to replace the filling box on the loom, she is sure of getting the correct filling if she gets a box which is the same color as the bracket. Each box holds about 300 quills. A. Keith Fawcett, Huntingdon, Quebec.

Old Hacksaw Blade Used as Shuttle Knife



A GOOD SHUTTLE SCRAPER can be made from an old hacksaw blade. For internal scraping, use a double-edged blade ground at one end into the form of an arc to the curvature of the inside of the shuttle. Stiffen it by placing two pieces of wood onto one end of the blade to form a handle.

Bind the handle in place with a heavy cord. We have found a scraper like this very valuable when we get a quill that is a little too large and is fouling the side of the shuttle.

We made a scraper for the outside of the shuttle with an old blade and a block of wood. We cut off the blade to a reasonable length and set it in to a groove on a block of wood the same length. We made the groove in the block a little thinner than the actual blade width, so that it holds the blade tight. We ground the outside edge of the blade on a surface grinder so that we have a straight edge and get straight scraping.

Avisco Develops Springier Rayon Staple for use in both Apparel and Upholstery

To meet the need for a springier and coarser rayon staple for apparel and upholstery uses, Avisco has developed an 8-denier crimped staple. This new product has a bouncy hand approximating wool 58-60's. It rounds out the rayon staple line by filling the vacant niche between 5½-denier, the coarsest apparel staple made up to now, and 15-denier carpet staple.

A Variety of Uses

Men's and boys' sweaters, bath mats, upholstery and drapery fabrics, all made entirely of 8-denier rayon staple, are in limited commercial production. Other suggested uses, both for 100 per cent and for blends, are in men's hosiery, slacks, suitings, blankets, hand-knit yarns, knitted and wooly-type neckwear and terry cloth.

Stiff, bristly effects are possible, similar to those obtained with mohair and coarse apparel wools. The new, 8-denier staple has been blended experimentally with mohair in frieze and plush fabrics, and the results have been highly satisfactory.

Greater Resiliency Achieved

Considerably more resiliency results from use of the new staple than may be obtained with 3- or 5½-denier rayon staple. The fabrics made with 8-denier staple cannot be approached with either finer rayon staple or with cotton. On the other hand, bath mats and throw rugs made with it are soft and luxurious.

Exceptional wearing qualities are indicated by preliminary wear and abrasion tests. Use tests are under way, but have not been completed.

Among the many advantages of the 8-denier rayon staple is that it can be spun on the cotton as well as the worsted and woolen systems.

The applications now in limited commercial use include yarns spun of 100 per cent 8-denier staple on all three systems.

Limited Production at Present

Production is on a pilot-plant scale, and probably will remain so for some time. Avisco is not seeking to market it now, since commercial production would have to be at the expense of other sizes, the demand for which exceeds the company's productive capacity. The corporation is interested, however, in encouraging experimental work with limited quantities, as it believes the future possibilities of 8-denier rayon staple are great.

Inquiries are invited. Address: American Viscose Corporation, Rayon Staple Sales, 350 Fifth Avenue, New York 1, N. Y.

MAKE USE OF *Avisco*®
4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

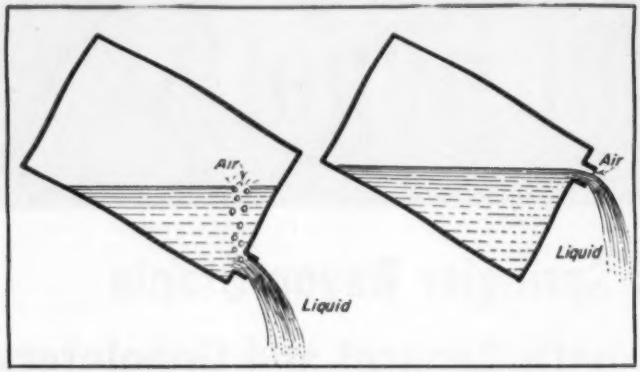
AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

Kinks AND SHORT-CUTS

Here's How To Pour Liquids Without Regurgitation



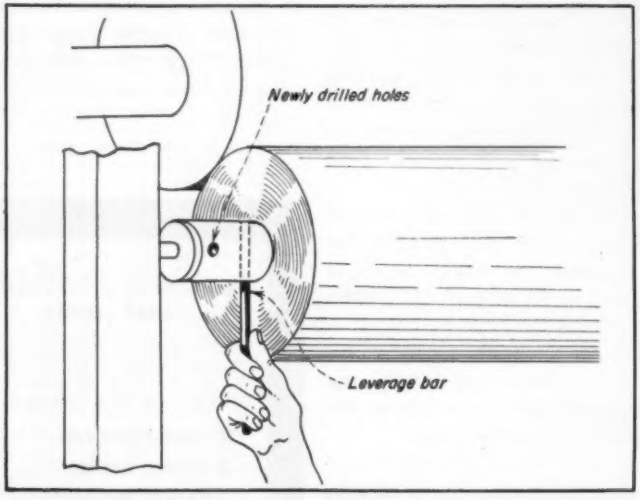
CANS AND DRUMS, which have off-center openings, are hard to pour liquids from. At best it is a sloppy operation if it is not done right. If the contents are corrosive, it can be dangerous.

The safe way to pour liquids from containers of this type is shown in the sketch at right. With this technique, the air, which replaces the liquids as they pour out, is free to enter the container; and you will have no regurgitation.

If you pour with the opening at the bottom of the container, the air, which must replace the liquids, must go up through the remaining liquid. Thus, the flow is temporarily stopped and regurgitation is set up.

With the opening at top, your pouring operation will be much cleaner and safer, and you will get no waste. Henry D. Grimes, Lawrence, Mass.

Here's How To Get Enough Tension on Cloth Rolls



NOT ENOUGH TENSION between the cloth roll and take-up roll on a loom will often cause creases to form in the slack fabric as it is rolled onto the cloth roll. It is hard to get enough tension between the two rolls if you tighten the cloth roll by hand.

So, here's what we do to obtain the required tension.

We drilled two holes at right angles through the cloth-roll shaft. These holes are slightly apart and are near the end of the beam.

We made them big enough to take a ½-in. bar. We then insert the bar in one of the holes and we have enough leverage to tighten the cloth sufficiently. Once this tightness is obtained, it will remain until the roll is doffed.

Best-Kink Award for May

Each month TEXTILE WORLD awards $25 to the submitter of the kink which is judged by a panel of over 200 practical mill men as the best for that particular month. A new batch of kinks appears each month, and a new group of readers acts as judges each month.

If you are asked to judge one of these days, be sure to help select the best kink by sending back your answer in time for final tabulation. Closing date for judging is the last day of the month in which the kink appears.

The best kink for May, according to TEXTILE WORLD reader-judges, was:

"Floating Binder Gives Softer Shuttle Boxing"

C. R. Batzer
Lancaster, Pa.

Mr. Batzer is being sent a check for $25 with the compliments of TEXTILE WORLD.

Inspection Mirror Reduces Eye Strain

CLOTH-INSPECTING MACHINES at Startex Mills, Tucapau, S. C., have mirrors like this one installed to reduce eye strain of the inspectors. The mirror is about 30 in. high and the same width as the machine.

The mirrors that we have installed on our cloth-inspecting machines have reduced eye strain of the inspectors. Each mirror is about 30 in. high and the same width as the cloth machine. It is mounted at a slight angle so that it reflects the light on the fabric and enables the operator to watch it in the mirror rather than as it moves across the table. The inspectors get a better view of the fabric in the mirror and see a larger area of it. Above each machine is a fluorescent-lighting fixture to give good distribution of light on the table.

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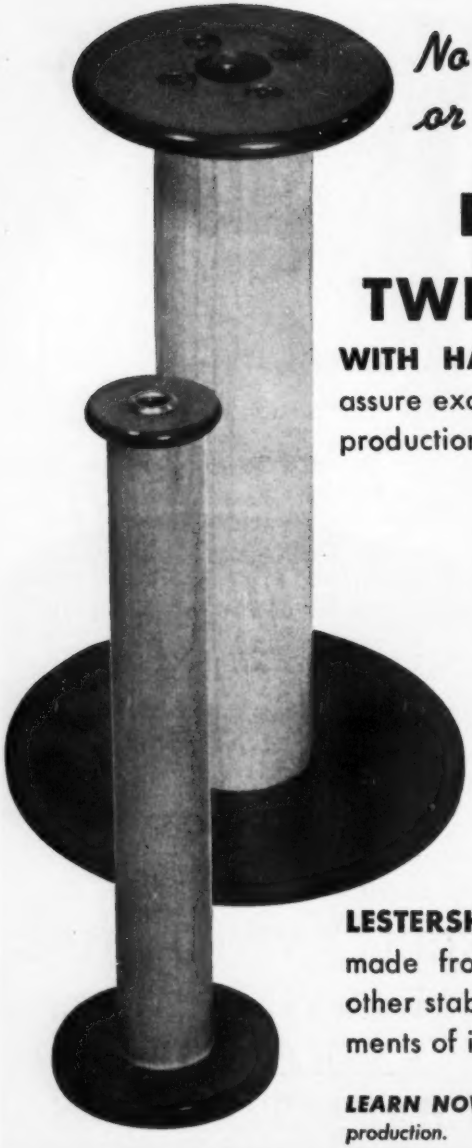

No matter how large or how small...

LESTERSHIRE TWISTER BOBBINS

WITH HARD VULCANIZED FIBER HEADS assure exceedingly long wear with trouble-free production because . . .

- Every bobbin is specially designed and fabricated for its particular application.
- "Lock-in" brass spindle bearings prevent spindle wear in large size bobbins.
- Tubing prevents winding or twisting of the barrels of slim bobbins.
- Special anchor head screws, on large size bobbins, guard the drive slot from wear.
- The hard vulcanized fiber heads remain smooth throughout the long life of these fine custom-made twister bobbins.
- Using them is true economy.

LESTERSHIRE BOBBINS OF ALL TYPES are made from aluminum, vulcanized fiber, and other stable materials, to meet specific requirements of individual mills efficiently.

LEARN NOW *how Lestershire special bobbins will improve your production.*

LESTERSHIRE SPOOL & MFG. CO.

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Odell Mill Supply Co., Greensboro, N. C.

Greenville Textile Supply Co., Greenville, S.C.

W. S. Taylor, Inc., 52 Vanderbilt Ave., New York 17, N. Y.

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Reader Service

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. . . OUTSTANDING TRADE LITERATURE reviewed on the next and following pages

. . . FURTHER INFORMATION on
New Textile Equipment
New Dyes & Chemicals
New Useful Accessories
Editorial Articles
and the Advertisements

WRITE ON THIS CARD

. . . to send a Kink, a letter for Round Table, or a news note

. . . to comment on anything appearing in this issue

. . . to query the editors about any manuscripts you might wish to submit to them

. . . to send an inquiry to the Questions & Answers department

Cards require no postage . . . but be sure to give your name, title, mill connection, and address (particularly essential in the case of the bottom card).

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. . . to request copies of trade literature described on the next and following pages or to get more information on New Useful Accessories described in this issue

WRITE PAGE NUMBERS

. . . to get more information on any piece of equipment described in the Textile Equipment News section. Where more than one item appears on the page, see table of contents on page 3 to obtain an identifying letter which also must be included

. . . to get more information on editorial material appearing on any page in this issue

. . . to get more information about advertisements appearing in this issue

(If more than one editorial item or advertisement appears on a page, identify the one in which you are interested.)

Dear Editor JULY, 1951

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NEW EQUIPMENT on page (give page number and identifying letter which can be obtained from the table of contents on page 3) .....

.....

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Outstanding TRADE LITERATURE
Free for the Asking

NO REPEATS . . . Listed here for July are current bulletins reviewed by the editors of TEXTILE WORLD. To get the ones you need, circle the number on the Reader-Service card, as described on the preceding page.

TEXTILE MACHINERY

A new Bramwell card feeder, Type G, is described in a folder prepared by Geo. S. Harwood & Son. Four precision-delivery features and five cost-saving features are outlined. **(F-1)**

Knitting machines of the 60-gauge, 32-section type are featured in a five-language catalog made available by Karl Lieberknecht, Inc. Operating advantages of their auto-welt turner, shorter needle, narrowing-point projection, and 14.5-in. needle bars are listed. Central location of control mechanisms is also described. **(F-2)**

Dusters made by C. G. Sargent's Sons Corp. are presented in a new folder released by that firm. Among the machines pictured are: 8-ft. picker duster, 6½-ft. cone duster, 10-ft. cone duster, carbonizing duster, and a rag duster. A crush-roll machine and an interesting panel on duster teeth complete the folder. **(F-3)**

A homogenizer that can run dry without damage is described in a folder issued by Scott and Williams, Inc. Self-priming and reversible seats are also listed as advantages. Friction losses are said to be minimized. Capacities of 30 to 150 gal. per hr. are available. **(F-4)**

The Electromatic cloth spreader, for automatic laying-out of fabric for cutting, is the subject of a release from Cutting Room Appliances Corp. Available in widths up to 90 in., the machine can be installed on any wooden or metal table that is 6 in. wider than the machine and 1¼-in. thick on the track side. Four attachments for special requirements are shown. **(F-5)**

How's your cloth room? Hermas Machine Co. has prepared the story of the layout at Berwick Weaving, Inc. A flow chart of their cloth room shows how Berwick has saved time and labor with the new system. **(F-6)**

Continuous-coating equipment is the subject of a paper reprinted by Industrial Ovens, Inc. Several types of systems and component elements are presented in both sketch and picture form. Web, dip, and extrusion methods of coating are described in their application to textiles, films, and synthetic monofilaments. **(F-7)**

AUXILIARY EQUIPMENT

Two series of speed reducers are described in bulletins published by Dodge Mfg. Corp. The single-reduction series, for output speeds from 115 to 330 rpm., has capacities to 27 hp. The double-reduction series covers the range of 13 to 133 rpm. for capacities up to 25 hp. **(F-8)**

Plastic sheaves for Crompton and Draper heads and for cam looms are shown in a booklet issued by National Plastics, Inc. The sheaves are self-spacing, self-ventilating, and self-lubricating. Reduced maintenance expense and increased production are listed as advantages. **(F-9)**

Large induction motors of two types are the subject of a booklet from Westinghouse Electric Corp. Type CSF is a squirrel-cage motor for constant-speed drive; Type CWF is a wound-rotor motor for adjustable-speed drive. Both types are available in a wide variety of open, drip-proof, and special enclosures. **(F-10)**

Recording voltmeters and ammeters are described in a bulletin issued by The Bristol Co. Ranges, uses, and specifications are given for the new line of equipment. Reproductions of charts and chart records document the bulletin. **(F-11)**

Roller chains and sprockets from stock are covered in a release from Whitney Chain Co. The catalog provides complete specifications and engineering reference tables on American standard roller chains, sprockets, and attachments. Dimensional data, strengths, and weights are also supplied on allied products such as block chain, cable chain, and flexible couplings. **(F-12)**

Magnetic separators—non-electric—are described in a booklet issued by Eries Mfg. Co. These permanent magnets, for tramp-iron removal, are said to operate without cost or maintenance. Claimed to be the most complete source of material on this subject, the booklet includes pertinent engineering data, drawings, and specifications. **(F-13)**

A basic manual on the fundamentals of industrial electro-chemical measurements and automatic control has been prepared by Brown Instruments Div., Minneapolis-Honeywell Regulator Co. Measurement of pH, redox, and conductivity is comprehensively covered. Principles of automatic control systems are also included.

Cutters and sewers will be interested in a distribution system described in a folder from Feedrail Corp. The electric feedrail permits machine manipulation without bother or danger from extension

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New York 18, N. Y.

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Reader Service (Continued)

cords. Advantages are said to be fast work, low maintenance, high safety, and ease of moving machines. **(F-15)**

Raw-cotton color can now be evaluated automatically, according to a data sheet prepared by Brown Instruments Div., Minneapolis-Honeywell Regulator Co. The colorimeter provides a direct reading of reflectance and yellowness values. Interpretation and evaluation of results are said to be easy. **(F-16)**

SUPPLIES AND CHEMICALS

Treaded leather belting is described in a booklet prepared by E. F. Houghton & Co. This booklet tells how to make belts endless on pulleys, how to calculate belt requirements, and how to evaluate advantages of treaded belts. **(F-17)**

Plastic casters of an improved material are the feature of a folder published by Faultless Caster Corp. The casters are said to be more durable than rubber, more shock-resistant than steel, and non-marking and chip-proof. Seven series of casters are listed and specified. **(F-18)**

Nacconol, a synthetic organic detergent, is the feature of a recent issue of *Dyestuffs*, a National Aniline Div. publication. In addition to physical and chemical properties, data are given on specific applications to wool, cotton, mohair, silk, and synthetic fibers. **(F-19)**

Steam-detergent cleaning, which saves time by eliminating hand-scraping, scrubbing, and brushing, is described in a folder from Oakite Products, Inc. Did you know that this method combines the physical action of steam and water, the dissolving action of heat, and the chemical action of a detergent? This combination is said to cut costs. **(F-20)**

Government specifications for the mildew-resistant treatment of textiles are summarized in an abstract prepared by Nuodex Products Co., Inc. Ninety-three specifications—and the fungicides required and deposition necessary—are listed. Army, Navy, Coast Guard, and Federal specifications are shown with their numbers and titles. **(F-21)**

Organic and inorganic chemicals made by Wyandotte Chemicals Corp. are attractively presented in a 77-p. booklet prepared by that company. Complete information on seven organic and seven inorganic chemicals is given. There is also a section devoted to methods of manufacture. **(F-22)**

The ABC's of Nylonizing are listed in a folder prepared by Hans C. Bick, Inc. The booklet tells how Nylonizing works and what it can do for mill man, converter, cutter, retailer, and consumer. Dozens of practical questions are answered. **(F-23)**

Steel shelving, waste receptacles, clothing lockers, storage cabinets, and other steel equipment are described in a circular from Precision Equipment Co. The waste can has non-rusting, stainless-steel feet. A rotary stockroom bin may solve some textile storage problems. **(F-24)**

"So much depends on a piece of leather," states a new catalog from Graton & Knight Co. Stroboscopic photographs taken at Lowell Textile Institute show loom action at 1/20,000-sec. Pickers, check straps, and other leathers are shown in action and described. **(F-25)**

Three mercerization studies by Sidney M. Edelstein have been published by Dexter Chemical Corp. "A Test for Mercerization in the Presence of Dyes" is particularly recommended to those dealing with military specifications. "A Study of the Mercerization Process" gives considerable data based on research work. "Methods for the Study and Control of Mercerization" reports on various experimental and process work. **(F-29)**

ENGINEERING AND MAINTENANCE

A Power-Factor Visualizer that explains the use of capacitors in solving low-

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with Stehedco and Southern
the BETTER Loom Harness Equipment
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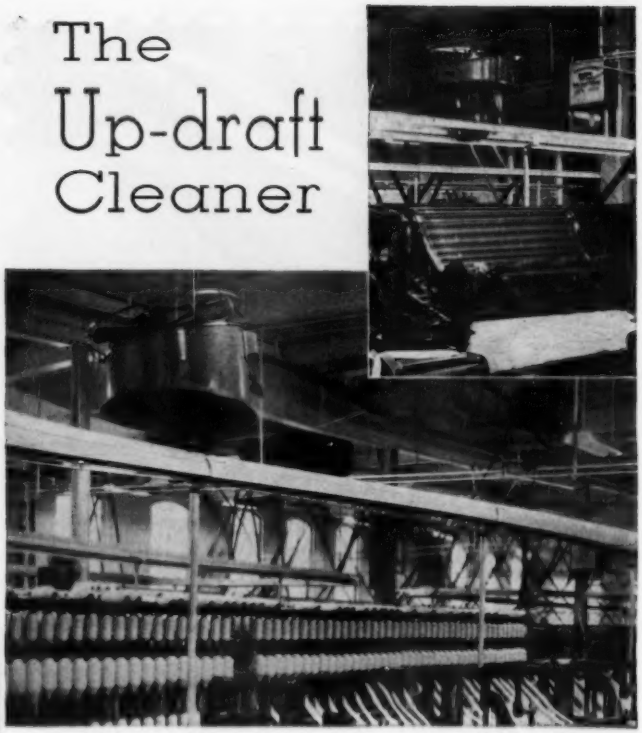
A Division of STEEL HEDDLE MFG. CO.
310 St. Hubert Street Granby, Quebec, Canada

The Up-draft Cleaner



Originally designed to be used with the Parks-Cramer Frame Cleaner (mounted on spinning, winding, twisting, and other frames), the Up-draft Cleaner has lately gained its independence and gone into the preparatory areas alone. It has proved particularly effective in the card room. Virtually all hand cleaning of upper areas is eliminated by this automatic, mechanical cleaner.

Operating on our standard track, it goes about its business without getting in the way of belts, shafting, or air conditioning ductwork, either present or contemplated.

With its continuously revolving column of air, it effectively cleans lights, pipes, conduits, and ductwork.

The Up-draft Cleaner is another worth-while investment in better textile mill housekeeping.

And what a difference a clean room makes!

Parks-Cramer Company

Fitchburg, Mass. PARKS Certified Climate Charlotte, N. C.

Reader Service (Continued)

power-factor problems is available from Westinghouse Electric Corp. Prepared as a slide-rule chart, the visualizer follows a hypothetical case and shows how capacitors helped. Power-factor improvement is discussed at length. **(F-27)**

Valve and flange data are included with information on hose nipples, bars, welding electrodes, and screw-machine products in a booklet put out by Worthington Pump & Machinery Corp. A special feature of the booklet is a graphic presentation of their method of reconditioning valve seats in the users plant. **(F-28)**

Viscosity and its measurement is the subject of a packet prepared by Brookfield Engineering Laboratories, Inc. The packet includes the following: 1) a catalog describing their Viscometer—its features, functioning, and models; 2) a "What Users Say" brochure; 3) a data sheet on low-viscosity ranges; 4) price lists; and 5) a list of pertinent article reprints. **(F-29)**

A hydraulic lift-truck of completely new design is the feature of a booklet published by Barrett-Cravens Co. The model has a self-contained pump and ram, is of single-frame construction, and has a 5,000-lb. capacity with a 6-in. lift. **(F-30)**

Battery selection and maintenance is discussed in a bulletin from Gould-National Batteries, Inc. A four-point plan recommends proper selection, adequate charging and handling, systematic maintenance, and constant knowledge of battery condition. **(F-31)**

Miniature ball-bearings for precision instruments are described in a catalog issued by Miniature Precision Bearings, Inc. The publication gives complete specifications on over 70 types and sizes of bearings. Typical applications include Servo mechanisms, textile rollers, and recording magnetometers. **(F-32)**

Are your floors slip-proof? You may be interested in a folder prepared by A. C. Horn Co., Inc. Their product, Tread-Sure, produces an anti-skid surface on wood, concrete or steel-deck flooring. Designed for exterior or interior use, the product may be brush-applied or troweled. It dries in 10 hr. **(F-33)**

Helpful hints on the application and maintenance of piping equipment are given in a manual prepared by Crane Co. Various types of valve designs, over 80 kinds of fittings, and how-to-do-it features are all included in the easy-to-read manual. A valve-selection guide is included with the manual. **(F-34)**

"Planned Lighting for Industry" is the title of a publication issued by General Electric Co. Tells bulletin how to engineer lighting to various tasks and discusses six principal lighting systems. Relationships of brightness and color-conditioning are also treated. **(F-35)**

Industrial logistics—as applied to textiles—are discussed in a report published by Elwell-Parker Electric Co. Fork trucks, tractor trucks, and trailers are shown in an integrated system in operation at Cone Mills Corp. and Avondale plants. **(F-36)**

Flexible couplings for power transmission are described in a leaflet issued by Thomas Flexible Coupling Co. The all-metal couplings are pictured, and two bearing applications are given. **(F-37)**

The ABC's of cooling textile mills are given in a manual issued by Carrier Corp. Four systems are described: central-station, combination, self-contained, and dyehouse-ventilating. Each system is graphically described and its best application given. A simple chart tells how hot 90° can really be. **(F-38)**

Fire protection through proper selection and installation of electrical equipment is discussed in a booklet prepared by Factory Insurance Assn. The entire booklet is devoted to textile mills. Before-and-after pictures and examples of good practice are shown. **(F-39)**

An electrostatic voltmeter designed to detect statically charged areas is illustrated and described in a brochure made available by Specialties, Inc. The meter is an easily operated, hand-held unit

There are at least 8 WAYS BECKMAN pH CONTROL Saves Money, Saves Time, Saves Waste in Textile Operations!

THE BECKMAN MODEL H-2 pH METER is one of a complete range of Beckman pH Meters available for every type of application*. The H-2 is particularly recommended for applications where high accuracy and simple operation—combined with the convenience and low cost of 115-v. AC operation—are desired.

It provides instant and direct pH readings, and a simple, built-in dial permits quick, convenient temperature compensation over the entire range of 0° to 100°C (32° to 212° F.). High reading accuracy is assured by wide-spread dual range scale that reads from 0 to 8 pH or from 6 to 14 pH at the turn of a switch. Same switch also provides instant millivolt readings from 0 to ±800 mv and from ±600 to ±1400 mv for titrations and oxidation-reduction measurements.

Built-in electrode support and compact case design save valuable space and permit easy portability to various plant locations.

Particularly important is the wide range of factory-sealed, maintenance-free Beckman Glass Electrodes available for use with this instrument . . . electrodes that are virtually unbreakable . . . that cover extreme temperature ranges from below freezing to above boiling . . . that have an unprecedented pH range with negligible errors . . . that are abrasion-resistant and chemically durable to a degree never before thought possible in glass electrodes.

*In addition to the H-2 Meter, other Beckman pH equipment includes completely automatic pH indication and control instruments for large-scale process applications . . . battery-operated models for complete portability in plant and field use . . . and a laboratory type instrument that features maximum versatility and accuracy for research and laboratory applications

In mill after mill Beckman pH Control has proved to be the key to greater production, higher quality, better uniformity in modern textile operations. It will pay you to find out how others—possibly your own competitors—are making vital savings in their operations through the scientific application of Beckman pH Control in such typical applications as the following:

DESIZING—to prevent damage to fibers when removing sizing materials.

BLEACHING—to control alkalinity of the bleaching solutions, whether caustic or peroxide.

SCOURING—to control alkalinity of the soap solutions and prevent damage to fibers.

MERCERIZING—to control the caustic and prevent damage to the product.

CARBONIZING—to insure proper acid concentration for thorough cleaning.

SOAKING—to insure neutral soaking solutions prior to "throwing" rayon or silk.

DYEING—to control acids and alkalies for uniform dyeing and protection to cloth.

LABORATORIES—to increase the speed and accuracy of various research and control operations.

. . . and many other applications in the multiple phases of the textile industry.

In addition to providing a complete range of pH instruments to meet every requirement, from portable plant and field applications to large-scale process control, Beckman also provides the industry's most rugged, most versatile, most complete line of glass electrodes for every type of textile operation. See your authorized Beckman dealer for assistance in applying Beckman pH savings to your operations. Or write direct.

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SOUTH PASADENA 12, CALIFORNIA

Send for free booklet "What Every Executive Should Know About pH." It's helpful and informative.

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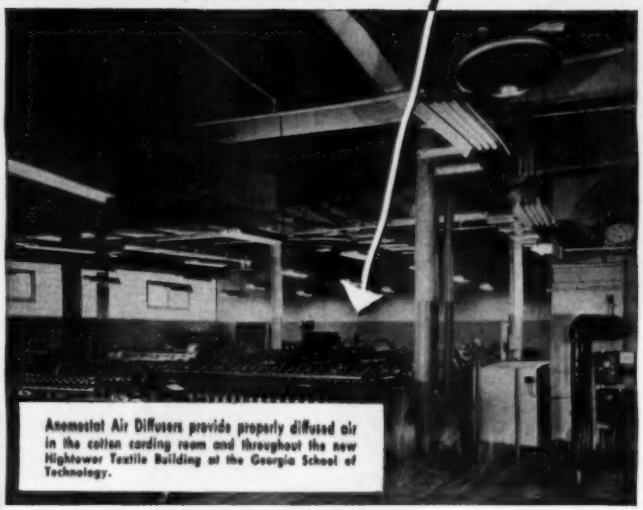
Anemostat Air Diffusers Here!

Better Quality Roving Here!



Anemostat Air Diffusers provide properly diffused air in the cotton carding room and throughout the new Hightower Textile Building at the Georgia School of Technology.

Scientifically designed Anemostat Air Diffusers accomplish this by distributing any volume of cooled or heated air in predetermined patterns . . . *without drafts.* Anemostats equalize temperature within the occupancy zone to plus or minus one degree and equalize relative humidity as well.

You can also use Anemostat Air Diffusers for spot cooling to neutralize machine heat loads. They are adaptable, too, to zone control of special areas. Anemostat's wide range of designs—including adjustable diffusers—assure flexible and perfectly balanced installations.

SPECIAL BULLETIN 32 tells the full story on the application of ANEMOSTAT AIR DIFFUSERS to textile manufacturing and processing. Write for your copy.

ANEMOSTAT®

DRAFTLESS *Aspirating* AIR DIFFUSERS

ANEMOSTAT CORPORATION OF AMERICA

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REPRESENTATIVES IN PRINCIPAL CITIES

"NO AIR CONDITIONING SYSTEM IS BETTER THAN ITS AIR DISTRIBUTION"

Reader Service (Continued)

that contains its own power in the form of batteries. **(F-40)**

A chart—"How To Care For and Maintain Your Belting"—has been prepared by Cling-Surface Co. Words and pictures list 14 steps from proper belt-width selection to accurate belt records. The chart is on heavy cardboard suitable for mill use. **(F-41)**

Insulation and resistance testers are described in a new bulletin issued by James G.Biddle Co. Insulation testers are available in capacities from 0 to 50 megohms. The ohmmeter has a range of 0.01 to 200,000 ohms. **(F-42)**

A valve catalog that describes hundreds of standard models and modifications has been prepared by Ross Operating Valve Co. Among the types described are: straightway, three-way, four-way, and four-way five port units in various sizes of hand, foot, solenoid, pilot, remote-control, cam, speed-control, shut-off, quick-exhaust, and miscellaneous valves. **(F-43)**

Miniature speed changers with zero backlash are described in a data sheet issued by Metron Instrument Co. The description includes their purpose, principle of operation, and other technical data. **(F-44)**

Stainless steels in two new grades are described in a booklet prepared by Armco Steel Corp. Advantages, corrosion-resistance and heat-treatment data, and mechanical properties of each grade are given. The new steels are said to be capable of hardening at low temperatures. **(F-45)**

Heat-transfer equipment is featured in a condensed catalog issued by Patterson-Kelley Co., Inc. This illustrated index of equipment includes blenders and process vessels such as kettles, mixers, and autoclaves. **(F-46)**

GENERAL

Three booklets for management have been prepared by Remington Rand Inc. Linedex, an efficient form of visible reference, is a rotary file designed on the sectional principle for future demands. Kardex is a system ideally suited for inventory control. Cabinet equipment is designed to hold Kardex files efficiently. **(F-47)**

"Safety Saves." That's the title of a little booklet prepared by Clark Equipment Co. The booklet uses some very clever cartoons to illustrate serious safety hazards encountered when driving a lift truck—or any type of vehicle, for that matter. **(F-48)**

Group coverage through Liberty Life Insurance Co. is presented in a folder prepared by that company. Both employer and employee benefits from the plan are discussed. Employee coverage is designed to reimburse for loss of income, surgical expense, accidents, hospital bills, or death. **(F-49)**

Dynel is the subject of a booklet issued by Carbide and Carbon Chemicals Co. Physical and chemical properties of the new fiber are discussed in the first section. The second section discusses the various properties in terms of their value in fabrics. **(F-50)**

Answers to Textile Quiz
On Page 154.

1. c. [TW, May, '51, p. 102]
2. b. [TW, May, '51, p. 103]
3. b. [TW, May, '51, p. 106]
4. c. [TW, May, '51, p. 109]
5. d. [TW, May, '51, p. 118]
6. a. [TW, May, '51, p. 120]
7. d. [TW, May, '51, p. 127]
8. a. [TW, May, '51, p. 130]
9. c. [TW, May, '51, p. 145]
10. b. [TW, May, '51, p. 116]

Try Stantex* Anti-Static Oils and Finishes

You can eliminate undesirable and costly static effects in textile processing of staple, yarns, and fabrics with Stantex* Anti-Static Oils and Finishes. Their use results in greater efficiency, increased production and improved quality. For example:

ON STOCK . . . when applied to all fibers and blends at picker, Stantex* Anti-Static Oils and Finishes reduce fly waste and broken ends, and produce more uniform yarns.

ON NYLON . . . when applied to yarn in coning and slashing, they eliminate wildness and produce better knitting and weaving results.

Many other successful applications are made on wool, rayon, acetate, cotton and synthetics. If static is a problem for you in processing, we invite your inquiry. Our technical staff will assist you to select the Stantex Anti-Static Oil or Finish suitable for your purpose.

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Ready power for your hand pipe tools with RIDGID

● Cut and thread more pipe faster, more easily with efficient No. 400. Lightest power unit made—one man can move it around on the job. Universal motor—forward, reverse, light socket power. RIDGID 3-jaw chuck, with chuck wrench ejector; self-centering workholder in rear turns with pipe. Sealed-in lubrication. Plenty of power, pays for itself in time and work saved in hand tool threading, cutting, reaming. Ask for the RIDGID "400" Power Drive at your Supply House.

RIDGID

★ Work-Saver Pipe Tools ★

Clearer-Waste Slubs

(*Continued from page 111*)

Avoid Glazed-Surface Rolls

Tests made on different types of top rolls revealed only a slight difference in the amount or nature of the clearer waste that collected on the clearer cloth from each type of roll. The variation in this amount from the highest to the lowest was only 5.4%. While the difference in amount was slight, the position of the clearer waste collected on the clearer was varied greatly. This position proved of great importance in frame operation and the formation of troublesome eyebrows.

The rolls that slicked up to a smooth, glassy surface failed to carry the clearer waste up beyond the point of contact between the roll and clearer cloth. The rolls that retained a large part of the original frictional surface carried the waste well up into the clearer cloth.

Rolls of each type were run until a curtain or eyebrow of waste formed down from each top roll and came in contact with the roving delivered from the front roll. The time required to form this eyebrow was noted on each type of roll. The eyebrow on the slick-surface rolls came in contact with the roving in one-fourth of the time required for the frictional-surface roll.

This rapid formation of eyebrows was determined to be the major cause of clearer waste being plucked off into the roving. These hanging eyebrows require more frequent picking or tucking-up by the frame tender. Neglect of the tender usually results in slubs in the yarn.

To determine the best top roll for each kind of work, this mill tested all types and was governed in roll selection by the test results.

Avoid Revolving Top Clearers

Experience in this and other mills is said to show that the slippage of the revolving clearer in contact with the top roll causes small bunches of rolled-up fibers to fall into the roving. This result was reported as being more marked on slubbers with their higher front-roll speeds and greater production per spindle. The revolving-blanket-type of clearers on drawing frames have been discarded in many mills for similar reasons.

Keep Clearer Edge Out Over Front Roll

The proper condition and correct position of clearers were found to be important in these tests. More rapid formation of eyebrows is caused by the front edge of the clearer resting on the top roll. In this position, the

TEXTILE AIR CONDITIONING

A Bahnson Humiduct air conditioning system with *refrigeration* maintains year 'round humidity and temperature control in this spun rayon twisting room; but—whether processing cotton, rayon, nylon or wool, Bahnson engineers will study *your* particular requirements and recommend the Bahnson system best suited to *your* needs . . .

HUMIDUCT UNIT SYSTEM

CENTRAL STATION AIR WASHER SYSTEM

CENTRISPRAY AIR WASHER SYSTEM

AIR VITALIZER SYSTEM

Bahnson Engineering is based on 40 years experience in textile air conditioning and Bahnson equipment assures maximum efficiency at minimum cost.

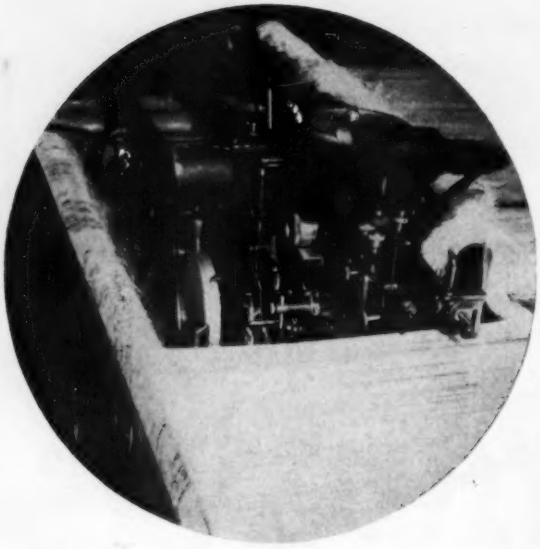
The Bahnson Company

ENGINEERS AND MANUFACTURERS

WINSTON-SALEM, N. C.

 For more information, write direct or use Reader Service post card.

Titan ties up to 108" of warp in **ONE** *operation*



The TITAN warp tying machines today are tying-in warps up to 108" *automatically* in one operation.

You don't have to stop this machine at the end of every section. It will tie every end from selvage to selvage in one uninterrupted operation. This is a real time and money-saving advantage.

This is why TITAN warp tying machines can make such verified production records as these:

Rayon, 75 denier	18,000	knots	per	hour
Cotton 20's	16,000	"	"	"
Woolen or Worsted	16,000	"	"	"
Nylon	16,000	"	"	"
Natural Silk	10,000	"	"	"
Silk Crepe, 100 denier	10,000	"	"	"

Warps of all these different yarns can be tied on the same machine with a simple change of needles.

For illustrated, descriptive literature regarding the TITAN warp tying machine write today to the

EDDA INTERNATIONAL CORP.
468 FOURTH AVE., NEW YORK 16, N. Y. CALHOUN TOWERS, GREENVILLE, S. C.
U. S. General Sales Agents

edge prevents the clearer waste from being carried up into the clearer cloth. With the front edge of clearer extending out a short distance beyond the point of contact with the top roll, the clearer waste is less likely to form an eyebrow.

Regularly Turn and Brush Clearer Cloth

The clearer cloth should be turned at regular intervals to present a new napped surface to the top-roll. Clearers should be brushed after picking. A fairly stiff brush will remove caked-on dirt, keep nap raised on clearer cloth, and provide a better wiping and holding surface for the clearer waste.

Results obtained from this concentrated, intensive drive on one particular detail of processing prove that the eyebrow evil can be greatly reduced if not entirely eliminated.

Knot-Tying Machine

(*Continued from page* 131)

tying machine by a special set of feelers that operate until the entire warp is tied.

Tension, another important factor in knot-tying, is also automatically controlled. Tension is let off as fewer ends remain to be tied: the result is uniform tension from start to finish.

MACHINE VERSATILITY

Livingston Worsted has used its knotter on 2/20s, 2/40s, and 2/60s yarn as well as 2/25s for government work. The knotter can tie silk or rayon decorative yarns to worsted yarns as efficiently as it can tie two worsted yarns. A change of two needles—a 5-min. job—is all that is necessary when going to a different yarn number.

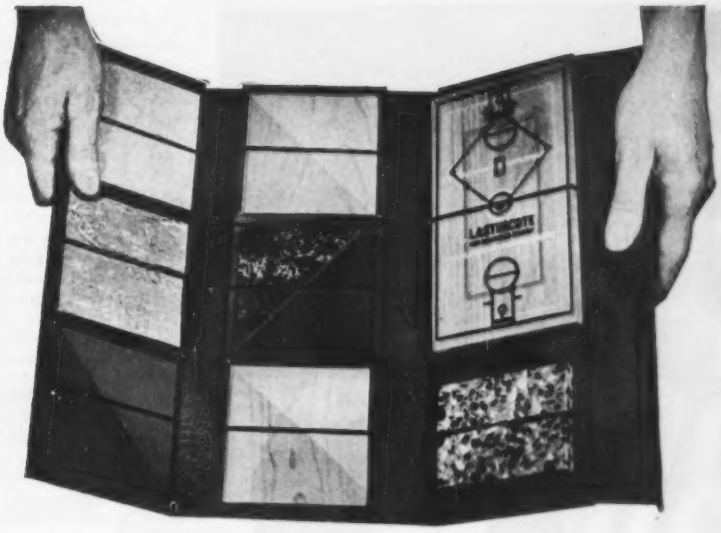
LEASES NOT NEEDED

A special attachment for the knotter permits tying warps without leases. Even without the attachment, the machine picks up "flats" in the lease without a stoppage.

ACTUAL SAVINGS AT LIVINGSTON

The Titan knotter operating at Livingston ties a warp in about 15 min., including preparation time. The complete operation from warping through weaving of a sample now takes about 2 hr. It used to take this long just to hand-tie the warp.

Besides the time saved in actual tying (the machine can tie up to 16,000 knots per hr. compared with 1,200 knots per hr. for a skilled knotter), Livingston has reaped an additional



VISIBLE PROOF that may save you the cost of a new floor!

A professional kit—specially designed for *visual comparison*. Contains virtually every type of flooring made from linoleum to terrazzo! One-half of each flooring sample is untouched—while the other half is coated with the West sealer or finish formulated to preserve the surface indefinitely. Select the sample that applies to you. Inspect the treated and untreated surface. Scratch it. Burn it. Soak it. Choose the finish that meets your requirements—without moving from your desk!

Now make the only true test. Pick one or more test patch sites in your heavy traffic areas. In front of washstands . . . doorways . . . elevators. Your West representative will *show your maintenance man* how to prepare the floor and apply the proper West finish. Or, if necessary, he'll roll up his sleeves and lay down the material himself! When the test period is over . . . you be the judge.

—And still the job isn't complete. As your West representative knows, the science of floor preservation is a three-fold job. Each step is vitally important to the continued beauty and long-wearing properties of your floors . . . all three are described in our booklet, "The Proper Care of Floors". A copy is yours for the asking. An actual demonstration is as close as your nearest West office. Just mail the coupon!

WEST DISINFECTING Company

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☐ Please send a copy of "The Proper Care of Floors"

☐ Please have a West representative *bring* me the booklet . . . and show me the visual comparison kit

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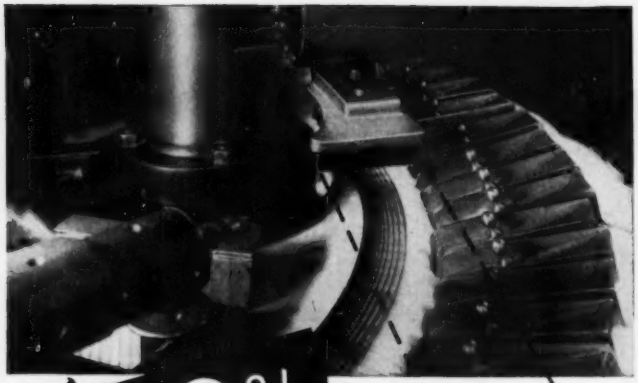
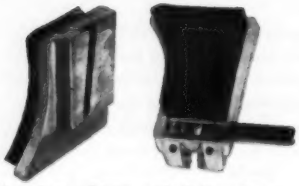


30% Saving

with FULLERGRIPT Dabber Brush for Noble-Type Combs



Cost records of actual operation reveal savings of 30% with Fullergript dabber brushes. Here is how you save:

1. With Fullergript the brush material is anchored in strips. Twenty-one of these strips make up the brushing surface of the dabber brush. As strips wear at the heel, they are reversed — to give double life.
2. Greater brush surface density — not only lengthens brush life but dabs the bulky short and fine wools into the pins more firmly.
3. Time saved — dabber heads are *not* sent back to the brush factory for repair or refilling.
4. Light weight keeps machine in balance. Dabber heads are light, one-piece, heat-treated Dow Magnesium Castings, which are sold outright and remain your property. Oil-repellant, split-proof.
5. Saves adjusting time — during installation you give these dabber heads a permanent set — casting may be drilled or slotted to fit your particular foot plate.

Let us show you a sample. No obligation. Simply write to . . .

FULLER BRUSH FULLERGRIPT At home... in business, too

THE FULLER BRUSH CO., INDUSTRIAL DIV., 3594 MAIN ST., HARTFORD 2, CONN.

dividend at the loom. By making several samples on the same loom beam, Livingston has eliminated costly start-up time at the loom.

A complete range of samples can now be produced in a short time. This situation helps this mill on "rush" orders or in the busy season.

KNOTTER OPERATION

After the warps have been prepared for tying, the first few knots are made by turning a handwheel. The motor switch is flicked when the operator sees that everything is all right.

Tying continues across the full width of the warp if the initial setup has been correct. Experience has helped Livingston to minimize stoppages, even with cable yarns.

An important feature of this knotter is the complete visibility of machine movements in operation. Any irregularity can be detected and quickly corrected. Adjustments can usually be made by slowing down the machine.

Throwing Quality

(*Continued from page 125*)

4. Winding: Good Traverses, Proper Functioning of Knotters, Close Inspection of Rejects, and Uniform Tensions Recommended

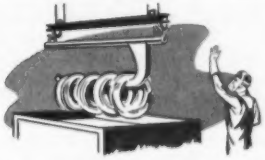
The first prerequisite for satisfactory winding is good package formation. The traverse should be adjusted to fit the bobbin exactly to prevent rolled and trapped ends. If the proper stroke of the traverse is not used, you will have trapped ends and excessive breaks during twisting. A wind that is too close will also cause trapped ends. The use of mechanical knotters is generally recommended. However, they should be kept in proper condition for maximum winding and twisting efficiency.

No attempt should be made to wind damp yarn, and winding speeds should never be changed without adjusting the tension. An increase in the winding speed will result in increased tension unless some adjustments are made with the tension devices. The normal winding tensions for viscose rayon during redrawing, or winding from cakes, should range between 0.2 and 0.3 g.p.d.

5. Uptwisting: Good Traverse, Proper Tension, Uniform Spindle Speeds Required

Adjustment of the traverse on upstroke-type twisters is necessary both on the takeup-shaft and headless-type package. The troubles encountered with an improper traverse on the take-

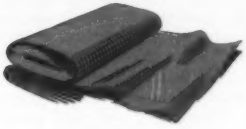
What Part Does
MURIATIC ACID
Play in Your Production Program?



For Metal Pickling

For Oil Well Acidizing

For Chrome Tanning of Leather



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In the Manufacture of Vinyl Chloride

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As a primary producer for over 50 years, General Chemical offers this important basic chemical in all grades and strengths from Standard to C. P. (Reagent) quality . . . from tank car to small bottle lots. The Standard grade is produced in 18°, 20° and 22° Baume strengths; Diamond and Crystal grades —20° Baume, and Reagent, Sp. Gr. 1.18.

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ARRANGED TO MEET *Any* MILL NEEDS

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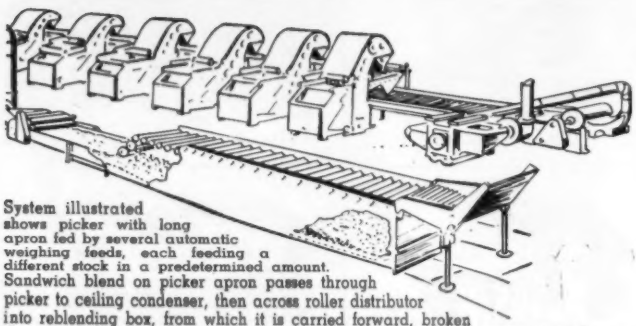

System illustrated shows picker with long apron fed by several automatic weighing feeds, each feeding a different stock in a predetermined amount. Sandwich blend on picker apron passes through picker to ceiling condenser, then across roller distributor into reblending box, from which it is carried forward, broken down by receding pin rolls and fed to a second picker, before passing to card room.

Proctor engineers, pioneers in the development of automatic blending equipment, are prepared to design a system to meet the specific needs of your mill. It may be semi or entirely automatic, depending upon your requirements. In either case it will be *accurate* and thorough. Fibers will be well mixed, the mix will be properly proportioned and the proportion will remain constant throughout the run, so that the last yarn made from the mix will be identical with the first. In one installation employing several weighing feeders, each set to feed predetermined proportions of stock, the mill management is extremely watchful. Only twice within a year has the variance in the blend exceeded 2% . . . and then the blend has been re-run. It's no wonder Proctor engineers are able to accomplish this—all of the major developments in blending equipment began on their drawing boards. Write for detailed bulletins.

OTHER EQUIPMENT FOR DEFENSE CONTRACTS

Proctor engineers are keeping in close touch with government requirements and specifications on all lines of textiles. They are ready to assist any manufacturer in designing equipment to meet his special requirements.

NOTICE: Much Proctor drying equipment and textile machinery is covered in full or in part by patents or patents pending.

PROCTOR & SCHWARTZ, INC.
710 TABOR ROAD • PHILADELPHIA 20 • PA •

up shafts, or takeup bobbins, are the same as on the winder bobbins; that is, trapped and rolled ends.

These difficulties are not experienced on the headless-type package to the same extent as on the other types; nevertheless, they should be controlled. The length of the initial strokes on the arbor are not as critical as on the bobbin; but once the build has started, a faulty traverse can be the source of considerable trouble.

The control of tension during upstroke twisting is just as important as at any other operation. With atmospheric conditions of 55 to 60% r.h., the normal running tensions should be approximately 0.25 to 0.30 g.p.d.

Some mill men feel that it is unnecessary to construct both regular and reverse wire flyers. Instead, all flyers are constructed in the same direction and used for both S and Z twist. This practice will result in an increase in tension when you use a flyer in a reverse direction. The increase in tension is usually from 4 to 6 g. on 100-den. yarn with a spindle speed of 10,000 rpm.

Some provision should be made to brake the flyers to prevent kinking of the yarn when the twister is stopped. Unless some effort is made to brake the flyer, you must remove the kinks by hand, working from spindle to spindle. This hand work will cause loss of production and higher labor costs.

The wires of the flyers should be cleaned each time an end breaks and also during creeling if the flyers are not to be replaced completely. The wires will collect a considerable amount of lint and gummy deposit while they are running; and since the flyer wires are usually run for several hundred hours, you must clean them several times during their life on the twister.

Spindle speeds should be checked frequently. You can make these checks easily and quickly with a stroboscope. Spindle speeds for voile and crepe twisting generally range from 9,500 to 11,600 rpm. Some twisters, however, operate at 13,000 to 14,000 rpm. spindle speeds on certain types of yarns.

6. Twist Setting: Proper Steaming Under Controlled Conditions Necessary

For high efficiency and quality in subsequent operations, you must twist-set or steam crepe-twisted yarn after each twisting operation and after quilling to prevent lively yarn and kinks. The conditions in the steaming oven are usually in the range of 170° F. dry bulb and 160° F. wet bulb. The time required to set the yarn satisfactorily

ranges from 15 to 30 min. for quills and 1.5 to 2 hr. or over for larger packages.

7. Doubling or Ply Twisting: Good Traverse and Proper Tensions Critical

Here, as in winding, you must form a good package. Since the bobbin from the ply twister is placed on the spindle of an upstroke twister, considerable difficulty can be encountered on the upstroke twister from trapped ends.

Proper tension control and balanced tension is an important factor during ply twisting, especially for combination yarns. Generally speaking, the tension on the acetate member of the yarn should have approximately one and a half to twice as much tension as the crepe member to produce a relatively balanced yarn.

The control of tension on the acetate yarn is a simple matter. However, tension control for the crepe member can be difficult because the crepe-twister bobbin rotates on the pin in the creel as the yarn is pulled off the side of the bobbin. You have very little, if any, control over the tension at the startup, and the tension will gradually decrease as the package decreases in size.

This decrease in tension can result in low-quality combination yarn if the yarn speed is too high. Keep your machine speeds within the manufacturer's recommended limits, and you shouldn't have any trouble.

Another factor to remember during doubler twisting is that all twist should be inserted as twist on twist. If an acetate yarn with a little Z twist is plied with a crepe member in the S direction, loopy yarn will result. The loops formed in continuous-filament yarn are a prime source of broken filaments and slubs that will degrade the finished fabric.

Another source of loops is the use of an acetate yarn with a very low initial twist even though the twist is in the proper direction. The acetate yarn should have at least 3 tpi.

8. Package Handling: Proper Handling of Any Synthetic Yarn Cannot Be Overemphasized

All yarn packages should be handled by the flanges, arbors, or cones to reduce the possibility of damaging the yarn. The careless handling of packages by operators can result in broken filaments or bruised, greasy, or dirty yarn.

All packages should be placed on yarn or pin boards and transferred between departments on the boards. This practice will eliminate one big

Now—POSITIVE CONTROL OF RELAXATION SHRINKAGE . . .

With Redmanized Fabrics*

IN COTTON TUBULAR KNITS
COTTON and WOOL COMBINATIONS
ALL WOOL JERSEY KNITS and
RAYON TUBULAR KNITS . . .

Now in use in several large mills, the process for relaxation shrinkage through normalization, invented by Frank Redman, is providing positive control for cotton tubular knits, cotton and wool combinations, all wool jersey knits that meet rigid government contract specifications, and now *rayon tubular knits*. The system is available in two forms—as a complete range including a normalizer, basket shrinker loop dryer, calender and folder; or in an alternate arrangement which produces results within the limits set for Redmanized* fabrics and applicable where up-to-date drying equipment is already in use. The latter, representing a much lower initial investment, consists of the normalizer, calender and folder and is used with existing drying equipment. For more details on the system write for Bulletin #369. *Reg. U. S. Pat. Off.

PRIORITY INFORMATION

As priorities become the order of the day, Proctor & Schwartz are maintaining up-to-the-minute information . . . and will help any manufacturer in need of equipment for defense work to secure the necessary priority from the government to speed delivery.

NOTICE: This system is completely covered by both process and machinery patents and patents pending.

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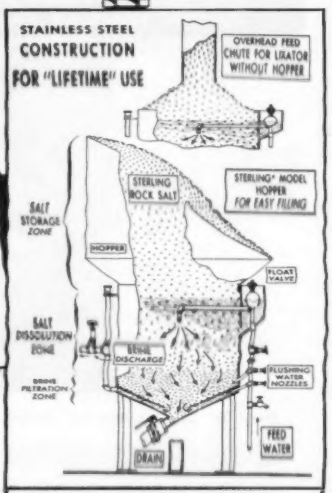
BRINE

That's Just Right

Without Measuring Or Stirring!

STERLING ROCK SALT
BRINE DELIVERED BY PIPE TO EVERY POINT IN YOUR PLANT
• DYEING MACHINES
• DYEING VATS
• ZEOLITE WATER SOFTENERS



• Why trust to "rule-of-thumb" measuring? Why go through the laborious shoveling, hauling, and hand stirring of salt and water? With International's Lixate Process for Making Brine you are assured accurate salt measurement every time. Stops waste through spilling. Saves time and labor.

• The Lixator *automatically* produces 100% saturated, free-flowing, crystal-clear brine which may be piped to as many points in your plant as you wish – any distance away – by gravity or pump. YOU SIMPLY TURN A VALVE to get self-filtered LIXATE Brine that meets the most exacting chemical and bacterial standards.

Savings up to 20% and often more in the cost and handling of salt have been reported by many Lixate users. Why not investigate?

HOW LIXATOR WORKS

In the dissolution zone—flowing through a bed of Sterling Rock Salt which is continuously replenished by gravity feed, water dissolves salt to form 100% saturated brine. In the filtration zone—through use of the self-filtration principle originated by International, the saturated brine is thoroughly filtered through a bed of undissolved rock salt. The rock salt itself filters the brine. Nothing else is needed.

WHAT THE LIXATOR PROVIDES

- √ Chemical and bacterial purity to meet the most exacting standards for brine.
- √ Unvarying salt content of 2.65 pounds per gallon of brine.
- √ Crystal-clear brine.
- √ Continuous supply of brine.
- √ Automatic salt and water feed to Lixator.
- √ Inexpensive, rapid distribution of brine to points of use by pump and piping.

An INTERNATIONAL Exclusive

The LIXATE* Process
FOR MAKING BRINE

INTERNATIONAL SALT COMPANY, INC., Scranton, Pa.

source of bruised and dirty yarn. If the boards or racks are made so that they cannot be stacked without resting on the tops of the yarn packages, special yarn trucks should be built so that the boards will not rest on the yarn packages.

9. Maintenance: Proper Maintenance and Cleaning Required for All Machinery and Equipment

Proper maintenance and lubrication of all equipment is required if top efficiency is to be realized. Most machinery manufacturers recommend the type and frequency of lubrication and inspection for specific points on the equipment.

In addition to this type of maintenance, the machine parts should be inspected and cleaned on a definite time table. For example, all guides, separators, tension bars, bobbins, and any other surfaces the yarn contacts should be inspected frequently for grooves, cut places, grease, or for any other source of damaged or dirty yarn.

Quality-Control Meeting

(Continued from page 135)

ever, the picker laps have less trash left in them. In other words, the opener causes less good fiber to be taken out as waste.

In one test, picker waste of cotton processed through an opening line that included the SRRL opener was 1%; through the same opening line without the SRRL opener, the same test gave 2% picker waste. The difference was in the amount of good fiber removed when the cotton was not thoroughly opened.

Asked if he thought the SRRL opener would replace other machines in the opening line or be used as an extra machine, Mr. Cheatham said that he thought the trend has been toward taking some beaters out. He emphasized, however, that the machine was designed as an addition to the opening line.

Statistical Control Pays Off

"An important part of statistical quality control is that observations are made during the process and not on the final product," said Mr. Crooks. Statistical control can be applied to any operation where like products are turned out in quantity. It is not to be confused with sorting or inspection operations. With statistical quality control, control charts can be made that will show plant management when an operation is in control. If it

ERIEZ MAGNETIC ATTRACTIONS

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DRAFTED...BECAUSE THEY ARE NEEDED TO SAFEGUARD MOBILIZATION PRODUCTION IN THE POWER, MINING, FOOD, TEXTILE, METALWORKING, RUBBER, CHEMICAL AND OTHER VITAL INDUSTRIES.

.....ACCORDING TO THE NATIONAL PRODUCTION AUTHORITY, **ERIEZ** PERMANENT MAGNETIC SEPARATORS RATE HIGH ON THE LADDER OF ESSENTIALITY..... *WRITE FOR A COPY OF THE 20-PAGE PRESENTATION WHICH HELPED OBTAIN THIS RATING.*

DYNAMITE PROCESSING

LINES AT THE **AMERICAN CYANAMID COMPANY'S** NEW CASTLE, PA., PLANT ARE PROTECTED FROM DANGEROUS ***TRAMP IRON*** BY **ERIEZ** MAGNETIC PULLEYS....USABLE ON ANY BELT-CONVEYING EQUIPMENT. MANY ORDNANCE AND DEFENSE PLANTS, TOO, USE **ERIEZ** NON-ELECTRIC **ATOM**AGNETS TO ELIMINATE THE POSSIBILITY OF EXPLOSIONS DUE TO FERROUS CONTAMINATION IN MATERIALS.

DO CIGARS WEAR BOBBY PINS ?...

NOT EXACTLY, BUT A CIGAR-MAKER FOUND 'EM A PROBLEM IN HIS FINISHED PRODUCT. SOLUTION: AN **ERIEZ** PLATE-TYPE **ATOM**AGNET ON THE FINAL BELT CONVEYOR SNATCHED OFF ANY CIGARS IN WHICH ***TRAMP IRON*** REPOSED. WORKS LIKE A CHARM ON OTHER PRODUCTS, TOO!

JUST OFF THE PRESS! GENERAL CATALOG #15, WRITE NOW!

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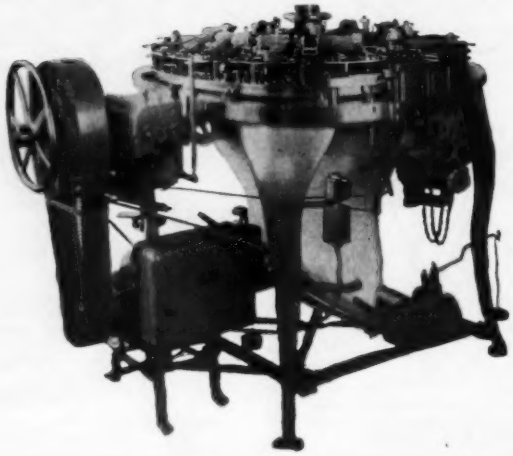
with a brand new

PUSH BUTTON CONTROL

Multiple Feed Transfer Machine



New 12 feed, 30" Transfer Machine

NO MACHINE LIKE IT ON THE MARKET!

New Two-Speed Motor Drive . . . a fully electrical control system *replaces the gear box arrangement common to all 2-speed mechanical systems. Entirely automatic, it is composed of standard equipment and introduces the following advantages over the conventional gear box:* (1) eliminates the continual wear problem present with a mechanical system; (2) may be set to operate precisely as needed with no lag or lost time in shifting speeds; (3) is simple to operate and compact in design.

New Striper Arrangement . . . a space saving, compact unit which is fully assembled and may be readily attached or detached to each feed —the striper is a drum style, having polished and hardened drum screws which are easily adjusted and located to give the desired striper selection—2, 3, or 4 finger striping on each feed.

Write for complete details

LEIGHTON MACHINE COMPANY — LEIGHTON — MANCHESTER NEW HAMPSHIRE

ESTABLISHED—1873 INCORPORATED—1894

is not in control, corrective action can be started at once.

Mr. Crooks cited the impractibility of depending on final inspection to keep quality up. By the time inspection of final products reveals difficulties, all the material in process is contaminated with defectives.

Mr. Crooks quoted E. H. MacNiece, director of quality control for Johnson & Johnson as follows: "There is frequently confusion between quality control and inspection. Inspection is a sorting process to classify materials, parts, or products as satisfactory or unsatisfactory. As control becomes more effective, the need for sorting decreases. Most industries today can no longer afford to produce quantities of goods and then sort the good from the bad."

High Lickerin Speeds Discussed

It has been established that high lickerin speeds tend to take out more waste. Mr. Grover brought up the question as to whether it is good or bad to take out this extra waste. He pointed out that as you increase lickerin speeds and get more waste, the additional waste contains an excess number of long fibers.

Since tests have shown that higher lickerin speeds result in fewer neps, it is entirely possible, according to Mr. Grover, that the extra fibers taken out are immature fibers. He stated that work is being done to determine exactly what kinds of fibers are taken out as waste.

In connection with studies of the effect of lickerin speeds on quality, fairly definite correlations have been established between lickerin sped, rate of production, and motes and fly waste. For example, with lickerin speed constant, as you increase rate of production, waste will decrease rather sharply at first.

If you continue to increase your rate of production, the percent waste will gradually start increasing again. On the other hand, with a constant rate of production, as you increase lickerin speed, you will get a rather sharp increase in the percent waste removed.

Of course, many factors will affect the rate of change in the waste; but fairly definite trends are established. Mr. Grover is continuing his work on this project.

Shirley Analyzer Valuable

The Shirley Analyzer can help the cotton buyer determine the percentage of good fiber and waste in cotton, as well as the kind of waste present. Cotton buyers have for years used waste content of cotton as a factor to deter-

CALCO dyelines

Advertisement
No. 21 of a series

Published by American Cyanamid Company, Calco Chemical Division, Dyestuff Department, Rockefeller Plaza, New York 20, N. Y.
New York • Chicago • Boston • Philadelphia • Charlotte • Providence

CALCONYL* DYES for Printing

With the recent addition of Calconyl Violet B Powder and Calconyl Red B Double and Single Solutions, the line of Calconyls now presents a wide range of powder and solution types to produce practically any desired shade. These products are especially recommended for economical roller or screen printing of tablecloths, handkerchiefs, towels and similar applications.

As a group the fastness to light is ample for these uses, while the fastness to most other common treatments destructive to color such as washing, perspiration and dry cleaning, is excellent.

These products can be supplemented with Calco Soluble Vat dyes to fill the requirements of the progressive printer.

Your Calco Representative will be glad to supply further information and samples upon request.

*Trademark

Chrome Dyes for Military Fabrics

The chrome dyes have long been reliable for the dyeing of woolen military fabrics. They offer extremely good fastness and, at the same time, good controllable dyeing properties. Even though fabrics for special uses may be dyed with other types of dyes, the chrome dyes remain well entrenched for the regular run of fast color fabrics. Some of the Calco line of chrome dyes which may be recommended for these uses are:

Calcochrome* Dyes:
- Calcochrome Yellow 2G
- Calcochrome Yellow G
- Calcochrome Yellow FC
- Calcochrome Orange LC
- Calcochrome Orange GR
- Calcochrome Brown PG
- Calcochrome Brown 2B
- Calcochrome Alizarine Blue Black B

*Trademark

Notes on the Operation of Open-Width After-Treatment Ranges

The current scarcity and high cost of chemicals demand that open-width ranges for rinsing, oxidizing and after-treating vat and sulfur dyeings be operated with utmost efficiency. The following points are worth attention:

1. Except for very open weaves or very unevenly surfaced fabrics, hard rolls which are properly crowned will extract liquids most efficiently.

2. The higher the temperature, the greater the extraction effect.

3. The slower the cloth speed, the greater the extraction effect.

4. Elliptical rolls at suitable locations in the treatment boxes greatly promote the interchange of liquor between bath and cloth.

5. Hot water sprays at the nip of wash-box squeeze rolls speed up the removal of surplus chemicals.

6. Well-designed and correctly placed overflows insure the desired countercurrent liquor flow and allow scum to flow away readily.

7. A steam-filled housing enclosing the upper guide rolls of selected boxes accelerates oxidation, soaping and similar treatments.

For the Textile Bookshelf

Reprint of Paper by 1950 Olney Medalist:—A Review of Textile Coloring and Finishing Research by G. L. Royer (Calco Technical Bulletin #818). Covers the important scientific contributions in the dyeing of wool, acetate rayon, nylon and viscose rayon, and the printing and finishing of textiles. Points up the need for increasing cooperation between the dyer and the scientist.

Dying of Wool Stock and Slubbing with Vat Colors (Calco Technical Bulletin No. 819—Supplement to Calco Technical Bulletin No. 797 issued in 1947). This brings the reader up to date on improved dyeing techniques and passes along knowledge derived from extensive mill applications.

Calco used approximately four pounds of Bronze gold in the maintenance of plant equipment in 1950.

TEXTILE BANKING COMPANY
Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

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mine prices, but the waste was estimated from visual examination.

The analyzer also can help mill management determine the effectiveness of a given cleaning process and makes it possible to know the quality of the waste removed. High cotton prices have made it imperative that we use the fiber in the best way possible and in the most economical manner. With the Shirley Analyzer, you can know where you stand.

The Shirley Analyzer is not satisfactory as a production cleaning machine, because it damages fibers. One test showed that yarn strength of a cotton processed through the Shirley Analyzer gave only 93.8% of the expected strength. Its value lies in its ability to remove about 90% of all foreign matter from cotton. As pointed out above, it is in this way that you can evaluate your cleaning processes.

One mill used the Shirley Analyzer to compare lickerin waste from a card that had a perforated screen with one that had a regular screen. An analysis of the waste from the perforated screen showed that it had practically no fibers in the fly. The regular screen showed about 20% more spinnable lint.

Mr. Martin and Mr. Woodruff pointed out that the machine runs better in a room, away from open windows and doors, and where heat will remain even. The temperature should exceed 65° F. and the relative humidity should not exceed 60%.

They also stated that it is customary to make three passages through the machine with raw cotton. First, the raw cotton is processed; then the processed lint is rerun to remove very fine waste; and last, the waste, which was removed in previous processes, is rerun to separate lint from the foreign matter. The strength of the air current through the machine is controlled by a movable damper, and the damper is closed somewhat for the third passage through.

The average time required for a test is 15 min. The only auxiliary equipment needed with the Shirley Analyzer is one balance of 200-g. capacity and 1/100-g. sensitivity.

TOE Mill Maintenance

(*Continued from page 129*)

All d.c. motors are checked each week and loom motors are checked once every month.

Other mills reported that motors are thoroughly inspected and cleaned every 12 mos.; air gap inspected and cleaned every 6 mos.; sleeve-type bearings blown out and oil checked each

Get TWICE the value for your steam trap dollar!

Just as the self-starter revolutionized the automobile, so Clark Duo-Step Leverage is changing old-fashioned ideas about steam trap efficiency.

Field and laboratory tests prove that Clark DUO-STEP Steam Traps more than *double* the drainage capacity of ordinary inverted bucket traps.

Ask your Clark representative for a demonstration on your steam lines—or write us for complete information.

Here's how DUO-STEP doubles drainage capacity

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Clark
THE HOME OF DUO STEP LEVERAGE

The complete line of dependable fluid controls

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New, Fast, Positive Fire Killer...

DRY CHEMICAL **WHEELED PORTABLE FIRE EXTINGUISHER**

Experienced engineering develops new, highly efficient 150-pound capacity dry chemical type wheeled portable fire extinguisher . . . has exclusive design that assures you of lasting, foolproof fire protection.

This new fire killer is easy to operate, compact, well-balanced and offers extensive maneuverability indoors or outdoors. Does a highly effective job on flammable liquid, gas and electrical fires, as well as surface fires involving ordinary combustible materials . . . granted unconditional B, C rating by the Underwriters' Laboratories, Inc.

Exclusive design renders constant free-flowing dry chemical . . . fire extinguisher is partially inverted for wheeling, then fully inverted at fire scene, which changes the position of the dry chemical in the tank and thereby provides mechanical breakage. This outstanding mechanical breakage feature, plus a continuous nitrogen pressured agitation or fluffing, together with a skillfully blended free-flowing dry chemical, guarantees a faster, more effective and complete discharge.

Rechargeable on-the-scene . . . no special tools needed . . . C-O-TWO Dry Chemical for recharging packaged in handy 50-pound size, moisture-proof containers . . . spare nitrogen pressure cylinders readily available.

Act now for complete free information on this newest contribution to modern fire fighting. Remember . . . you can't put fire off . . . fire doesn't wait. Get the facts today!

C-O-TWO FIRE EQUIPMENT COMPANY
NEWARK 1 • NEW JERSEY

Sales and Service in the Principal Cities of United States and Canada
Affiliated with Pyrene Manufacturing Company

MANUFACTURERS OF APPROVED FIRE PROTECTION EQUIPMENT

Squeez-Grip Carbon Dioxide Type Fire Extinguishers • Dry Chemical Type Fire Extinguishers
Built-In High Pressure and Low Pressure Carbon Dioxide Type Fire Extinguishing Systems
Built-In Smoke and Heat Fire Detecting Systems

week; starters blown out every 300 hr.; contacts and spring pressure checked when cleaned.

On transformers, the oil is checked every Spring. At this time, cores for sludge are checked. If circulating passages are closed, drain, clean, and replace oil. Charts are maintained to show work and when performed.

Starters in opening, picking, and carding rooms are cleaned and overhauled every month; in all other departments, every 2 mos. Oil is changed in switches every 6 mos. Shorting and burning of contacts can be reduced by closing and opening switches rapidly. Magnetic starters are cleaned from once a month to once each 6 mos., mills reported.

It was agreed that maintenance and repair of electrical equipment depended upon many factors, including operating conditions, severity of use, and type of equipment. However, it was agreed that the maintenance and repair schedule should be based on experience.

One mill has replaced fuses with circuit breakers. Motors are operated at from 560 to 660 v. at the switchboard, and efforts are made to maintain 550v. on circuits.

Village Maintenance

Question: Outline your system of village maintenance:

Mills reported contracting with outside firms for maintenance and repair, use of a regular village-maintenance crew and, use of mill crews to do village maintenance. Maintenance of one mill-village is under supervision of a full-time overseer.

Some wood preservatives are used on steps, sills, porch-floor joists. Pine olive, creosote, and Perma-Wood concentrate are used.

Another mill reported using wood preservatives for dipping porch flooring. This mill has not used wood-preservative material for termite and beetle control but uses ground poisons.

Lubrication Practices

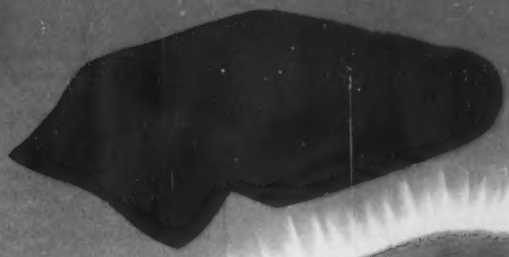
Question: Discuss your system of centralized lubrication and protective machinery maintenance.

One mill reported having a few machines equipped with centralized lubrication with good results. Lubrication is handled by an oiling crew on a scheduled basis.

Another mill reported installation of the Bijur system of one-shot lubrication on all spinning frames and the Lincoln Centr-Oiler system on one roving frame and one loom for trial purposes.

Other mills reported that each de-

PIONEERS IN THE USE OF
NON-IONICS FOR SCOURING



Brighter

when scoured with an IGEPAL®

With the aid of Igepals—non-ionic surfactants—and of simple controls with existing equipment, the long-established "art" of wool scouring has acquired scientific stature.

Soap and the ever necessary alkali pose problems of lime scum and finished wools of harsh "hand"—"polar" synthetics suspend wool soils too well, retard settling out, increase the redeposition factor.

By contrast, an Igepal—with its non-ionic, non-polar and efficient detergent and emulsifying action, even in hard water—needs no alkali to remove residual fats and suints after the first bowl. The wool is not only thus cleaned, but all danger of carrying alkali into the dryer is removed.

These non-ionic surfactants have high cleansing efficiency in a neutral bath—no fibre substantivity and complete rinsability. The economical use of an Igepal can reduce the wool grease content to as low as 0.3%. The resulting improvement of the wool in softness, loftiness and whiteness—compared with a soap scour—can be fully appreciated only after large-scale trials.

We invite you to call upon our Technical Department for assistance in problems of scouring raw wool.

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"YES it can be done!"

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DO GET EVERY HANGING END
IN SHEARING PROPERLY WOVEN FABRICS.

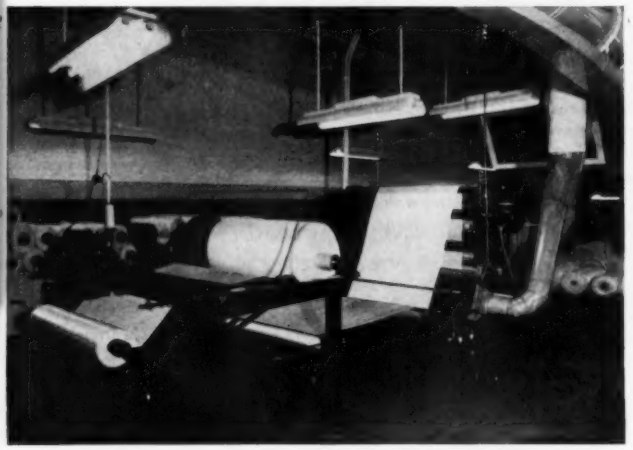
Hermas AV shears clear face, back, and both selvages of cloth in a single run through, at speeds up to 125 yards per minute. Every end in correctly woven fabrics is removed.

This shear is completely motor driven, with separate motors for each revolving knife roll.

The cloth, because of the vertical feed, always comes to the knives in such a way as to have all loose ends hanging free to be drawn into shearing position by air suction and taken off flush to the surface of the fabric.

An electrical device passes seams automatically at each knife roll separately, shearing to within 8 inches of the seam. Only one knife roll is stopped at a time, instead of all four rolls as in other shears.

Write for 8-page, 3-color folder with full facts of Hermas shears.



HERMAS MACHINE COMPANY
America's only exclusive specialist in clothroom equipment.
HAWTHORNE NEW JERSEY

partment has responsibility for lubrication and maintenance of its own productive equipment. Lubrication is centered under oiling crew on a scheduled basis.

Plant experimentation and experience was reported by one mill as the best solution to different types of lubrication. Lubrication schedules are altered to keep pace with changes in equipment design.

Productive-equipment maintenance is scheduled for overhaul once each year for opening machinery; once each year for spinning, spoolers, twisters; once each three years for looms, and as needed on beaming and slashing.

Cleaning Humidifiers

Question: Discuss your method of cleaning and maintaining your humidifying system:

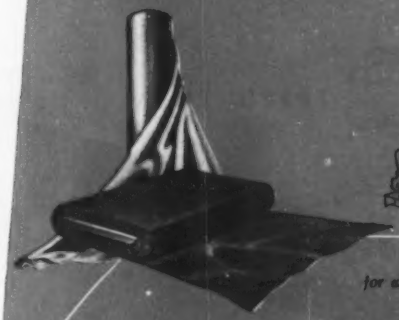
One mill reported it had Humiduct, atomizers, and heavy-duty-head types of humidification. Heads are cleaned and drain lines blown daily in the card room, and weekly in other departments. Humiducts are maintained as follows:

1. Outlets are brushed daily.
2. Recirculation screens and exhaust louvers are cleaned twice each shift.
3. Duct lines are cleaned inside and outside daily.
4. Inside of damper unit and fan motors are blown off monthly.
5. Control-cabinet screens are cleaned twice daily. Cabinet is completely cleaned once each week.
6. Fan- and evaporator-motor bearings are lubricated each 3 mos.
7. Atomizers and lines are cleaned daily, and drip legs drained twice daily. Over-all operation of all humidification is checked twice daily.

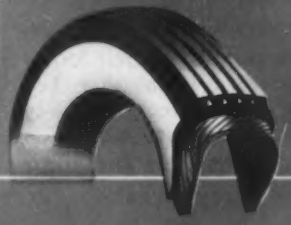
Another mill reported that a head humidifier man is in charge of the entire system and that each department has a service man for its particular system. One mill reported cleaning of dry ducts by department personnel each six weeks.

In a central-station system, the lint that is filtered from intake-air side is removed by a self-cleaning revolving screen and the water is pumped back to the washer. The washer is cleaned once each week. Units are cleaned and painted once each 6 mos. to minimize corrosion. Return screens are cleaned every 24 hr. by a third-shift maintenance man. Supply outlets of atomizers without air changers are cleaned each week by department personnel. Regulators are cleaned and checked once each day.

Another mill dismantles the atom-



Chemical yarns and fibers for all types of wearing apparel and household furnishings



Strong, tough, tire cord and fabric for longer wear, greater safety, and lower cost

Cellophane and cellulose acetate transparent packaging materials

HIGHLY PURIFIED WOOD CELLULOSE

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is a basic raw material from which the products shown here are made.

Rayonier supplies a number of types of wood cellulose, each specially developed to produce best results in conversion to these and many other articles.

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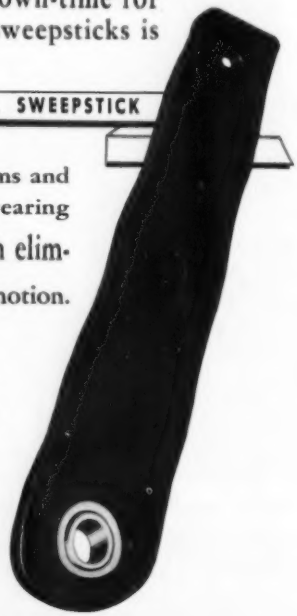
Mill owners who have been using Heim Unibal Sweepsticks on their looms for from one to two years, report that they last longer than any other sweepstick they have ever used, that their pick action is smoother, and that down-time for replacing worn out sweepsticks is greatly reduced.

THIS IS THE HEIM UNIBAL SWEEPSTICK

Try them on your looms and benefit by this long-wearing Heim sweepstick which eliminates slack in the pick motion.

The Heim Sweepstick has a self-aligning Unibal bearing assembled as an integral part of the body of resilient, shock-absorbing, rubber bonded fabric. The secret of its longer life is the Heim Spherical Bearing which prevents elongation and wear at the stud hole.



THE HEIM COMPANY

FAIRFIELD, CONNECTICUT

194 For more information, write direct or use Reader Service post card.

izers completely twice each year. Fronts of all heads are cleaned once each month.

Salvaging Worn Parts

Question: How are worn parts salvaged and put back in supply room for distribution? Who is responsible for deciding what is to be salvaged?

There was some variation in the system employed, but generally old parts are returned to supply room when new ones are issued. Some mills collect parts on a daily or weekly basis, and inspection is made by either overseers, foremen, master mechanic, or machine shop to determine if parts can be repaired. Cost of repair vs. price of new one is the deciding factor in many mills. In case of critical items, the cost of repairing is not considered.

For the most part, repaired parts are returned to the stock room and issued without charge. Some mills reissue to fixers without charge.

One mill has established a separate supply room for repaired parts, and these are issued without charge.

STA Meeting

(Continued from page 101)

▶ **The average operator** should be able to make about 25 fiber-strength tests on the Pressley tester per hour. Each Fibrograph test requires about 5 min. to take the sample, set it up, and make calculations. Tests to determine fiber maturity require considerable time and technique; however, the Arealometer is expected to speed up maturity and fineness testing. The Micronaire tests fineness quickly, but it does not give an indication of maturity.

▶ **Cotton is bought** by one small mill in this way. The general manager of the mill has samples sent in from his suppliers; and he checks those samples for grade, color, and staple length. He returns the samples of the cotton he wants and tells his supplier to send those bales on tentative acceptance. When the bales come in, they are tested for staple uniformity, strength, fineness, etc. If bales do not meet the specifications the mill has set up, they are returned to the supplier. This mill does not have a cotton classer.

2. Carding and Spinning

▶ **Drafting causes neps,** according to Ivan Feng, research associate, School of Textiles, N. C. State College, Raleigh, N. C. The over-all increase in neps of carded yarn, after it has

COLORS *that won't fade out...*

Du Pont Vat Colors are well known for all-around fastness to sun, laundering, perspiration or dry cleaning. And Du Pont vat dyes assure you deep penetration, uniformity and brilliance.

You can choose your colors from a wide selection—in Du Pont PONSOL* and LEUCOSOL* (anthraquinone-type dyes) and SULFANTHRENE* (indigoid and related dyes). Our Technical Staff will be glad to help you find the right dye—and the right method of application—for all of your fabrics.

E. I. du Pont de Nemours & Co. (Inc.), Dyestuffs Division, Wilmington 98, Delaware.

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Always dye with an eye to the end use

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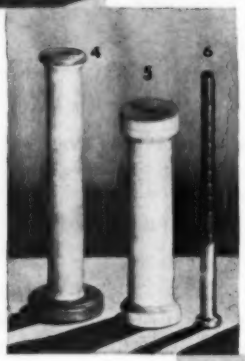
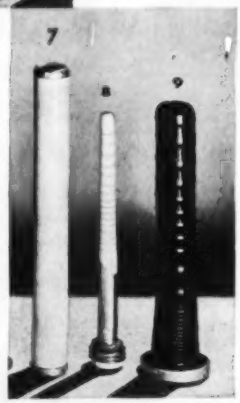
Du Pont Dyestuffs

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

LOWELL
Bobbins, Cones
Rolls & Tubes



1 Ring spinning bobbin
2 Automatic loom bobbin
3 Winder cone
4 Worsted twister bobbin
5 Winder tube
6 Bobbin for non-automatic loom with electric feeler motion
7 Warp spinning tube
8 Automatic loom bobbin for electric feeler motion
9 Worsted spinning bobbin



Lowell bobbins, cones, rolls and tubes are made from maple, birch or beech wood, as required. All wood is thoroughly seasoned, air dried and properly cured in a modern dry kiln. Bobbins are finished with oil, lacquer, shellac or enamel (baked on) as specified. Inspection is rigid and only perfect products are passed for shipment.

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LOWELL SHUTTLE COMPANY
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been carded, is about 140%. This increase is fairly constant. Combing takes out a very good percentage of neps and fibers that are likely to nep. A study of nep counts in mills in the South has shown that the average is from 25 to 30 neps per 100 sq. in. This figure, of course, varies with conditions in the various mills, the types of cotton, size of sliver, etc.

▶ **Waste control works** well in one mill that uses what is known as a Waste-Meter. Waste standards are set up for each machine, and weekly records show how the actual waste from each machine compares with the standard. About 3 to 4 mos. were required to set up the standards. Employees do not try to keep the waste figures down because the mill has made it clear to them that it is just as bad to have too little waste as too much waste. This system has resulted in a saving of about 7% in waste.

▶ **Card strips** are put in the mix at one mill and work very well for coarse work. Another mill runs 24% card strips in the mix. This mill rebales them and starts them in at the picker. It has found more shedding and more ends down.

▶ **A change from white** to deep-colored sliver causes trouble with the knockoff motion on lap-back drawing frames. It was stated that colored work has more drag than white as it goes through the trumpets. One mill allows the colored sliver to age before it is drawn and says that the aging helps some.

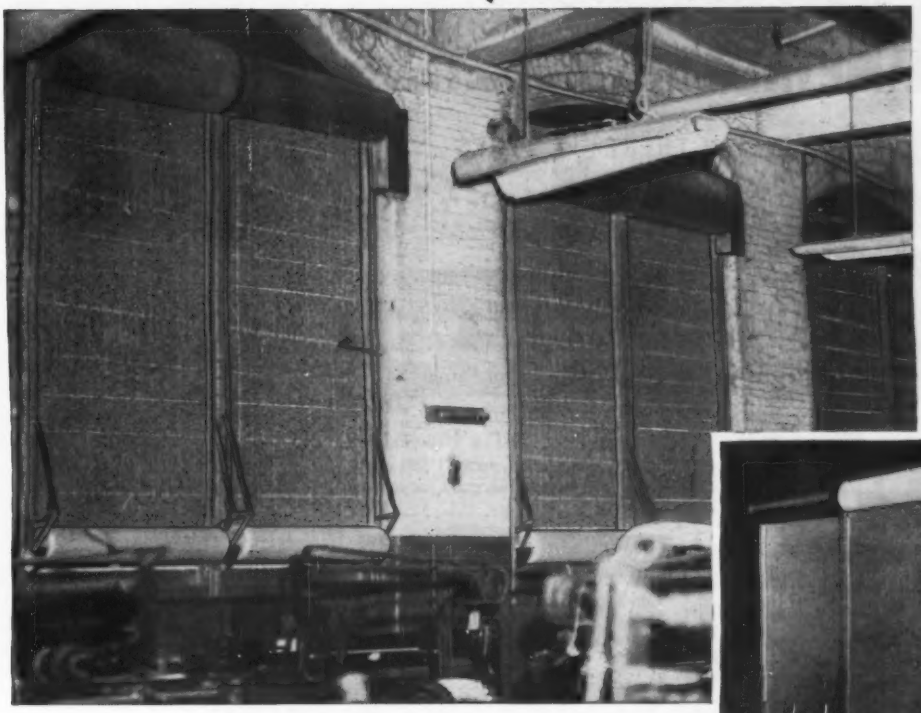
▶ **Perforated screens** under the cards cut down waste considerably. One mill man said that he uses perforated screens under the lickerins and the rib type under the cylinders. He gets more trash and fine sand with the perforated screen. These screens are cleaned once every 6 mos. by one mill and once a year by another.

▶ **Spinners do all the cleaning** in one mill that uses a revolving clearer on the front line of rolls and no clearers on the middle and back lines. This mill has model-F and F-2 Whitin spinning frames and uses Accotex top-roll coverings.

Pneumatic roll pickers are used by women cleaners in a sheeting mill. Each woman picks 26 frames per shift, of which 6 to 7 frames are thoroughly cleaned. The spinners run out the guides and clean the rails.

On rayon, one mill picks the rolls with the frames standing to keep trash and greasy fibers from being thrown into the yarn. The spinners

today's best buy is better air!



Auto-AIRMAT air filter
LICKS LINT PROBLEM in textile mills!

Auto-Airmat . . . the only practical automatic, self-cleaning filter . . . developed especially for textile mill service

Costly maintenance problems of primary air cleaners in textile mills are finally solved by AAF's new Auto-Airmat. It eliminates expensive overtime cleaning jobs and reduces the disposal *headache* to a minimum.

This automatic, self-cleaning dry-type air filter employs low cost Airmat* paper as the cleaning media. Installed in rolls at the top of the Auto-Airmat, the paper moves on a continuous screen down the face of the filter and is rerolled automatically at the base. The collected lint and dust is rolled up with the paper media, for easy disposal. Rate and frequency of screen travel and paper media usage is automatically controlled by the lint concentration in the air to be cleaned. Whether you are manufacturing textiles or processing fibrous material, the Auto-Airmat will do your filtering job at lower cost and with greater efficiency. For complete information call your AAF representative or write us for Engineering Bulletin No. 234.

**AIRMAT* *is the trade-mark (Reg. U. S. Pat. Off.) of the American Air Filter Company, Inc., for various air filters, dust collectors, and filtering media.*

AAF **American Air Filter**
COMPANY, INC.
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WESTON *Readable* ALL-METAL THERMOMETERS

—AVAILABLE IN THESE 3 TYPES

STANDARD INDUSTRIAL THERMOMETERS

All-metal dial types with stainless steel stems, in straight and angle forms. Scale lengths 3"—6" and 9", with stems from 2½" to 72". Available as testing thermometers, and for general purpose and heavy duty service. Ranges from −100 to +1000°F. All-metal construction prevents breakage, assures dependable accuracy for longer periods.

CONTACT MAKING THERMOMETERS

Combines the features of the all-metal indicating thermometer with an alarm or control device. Has adjustable contact arm mounted in the glass and bezel. Supplied to make contact on increasing or decreasing temperatures. Has positive magnetic type contacts. Contact rating . . . 100 ma at 110 volts a-c; 50 ma at 110 volts d-c. Stem lengths 2½" to 24".

MAX-MIN* THERMOMETERS

Equipped with a manually set red index which moves up or down scale with pointer, remaining at extreme temperature reached until reset. Thus one reading gives present temperature, and maximum or minimum reached since last reading. Available in scale lengths of 6" and 9"—stem lengths 2½" to 24".

Literature describing Weston all-metal, as well as electrical and glass thermometers, sent on request. WESTON Electrical Instrument Corporation, 637 Frelinghuysen Avenue, Newark 5, New Jersey . . . manufacturers of Weston and TAGliabue instruments.

WESTON *Instruments*

do the picking, and cleaners pick and clean 4 to 5 frames per shift.

Some spinners prefer to pick rolls with their fingers. A spinning overseer said that roll pickers are very good on the back steel rolls. This man has taken the underclearers out on the back lines of rolls.

▶ **Spinning frames** need to be stopped when you clean the slip rolls on long-draft Saco-Lowell frames, especially on fine work. You will get thick and thin places if you take the roll out when the frame is running. A mill on coarse work takes these rolls out and cleans them with the frame running. Another mill, which is spinning 3s to 20s, cleans the slip rolls at the doff.

▶ **Spinner work loads** were described by several mills as follows:

8 sides per spinner, 13s to 36s yarn, spinners do their own cleaning;

12 to 18 sides, 21s to 35s warp and filling, spinners do their own cleaning;

10 sides per spinner, 11s to 13s filling, spinners do their own cleaning;

8 sides per spinner, 6.75s, spinners do their own cleaning;

1,800 spindles per spinner, 21s and 30s warp, spare hands help clean.

▶ **Front rolls** are oiled by various mills once a day, three times a week, and twice a week. Back and middle rolls are oiled by some mills three times a week; others, twice a week; and others, once a week.

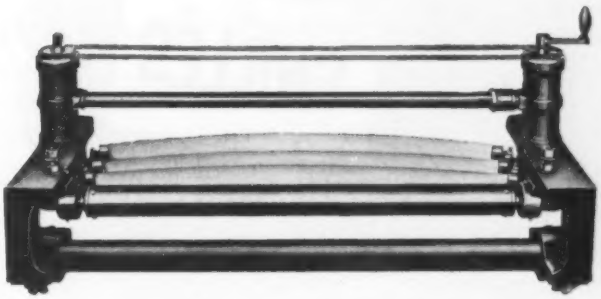
3. Warping, Slashing, and Weaving

▶ **Floating binders** were said by several mills to check shuttles at higher rates of speed. One mill had trouble with the springs being too weak; but after these difficulties were ironed out, the binders gave good service.

▶ **Looms are lubricated** by one mill as follows: transmitter gears, twice weekly; crankshaft gears, 3 times weekly; pick motions, twice weekly; harness cams, twice weekly; let-off motion, once weekly. This mill puts grease on with a brush and uses electric guns for Alemite fittings.

▶ **Dobby heads** are overhauled by the maintenance crew in one mill. The dobby head is taken out and another one is put in its place while the old one is being overhauled. Another mill has the regular fixer overhaul the dobby heads periodically. When the fixer is doing his overhauling work, the breakdown man helps him on his section.

▶ **Tight selvages** cause trouble in the



1950-1951 Progress Report

Hunter has real progress to report for its first year as owner of Thomas Leyland Machinery Co. Leyland-Mycock rubber, neoprene or metal clutch Expanders for cotton, wool and synthetic mills have been improved both from a manufacturing and engineering point of view. This means better results and less maintenance when Leyland-Mycock Expanders are used with any type of textile machinery. Service has been greatly improved — not only is the nationwide Hunter engineering field organization at your call, but a new Hunter plant at Greenville, S. C., has just been opened to give full engineering and service help in the Southern territory.

Whatever your expander needs, there is a Leyland-Mycock model to serve you best, and the Hunter organization to guarantee specified results.

Write for Bulletin giving full details and specifications on Leyland-Mycock Expanders for every textile need.

Call in a HUNTER Field Engineer...

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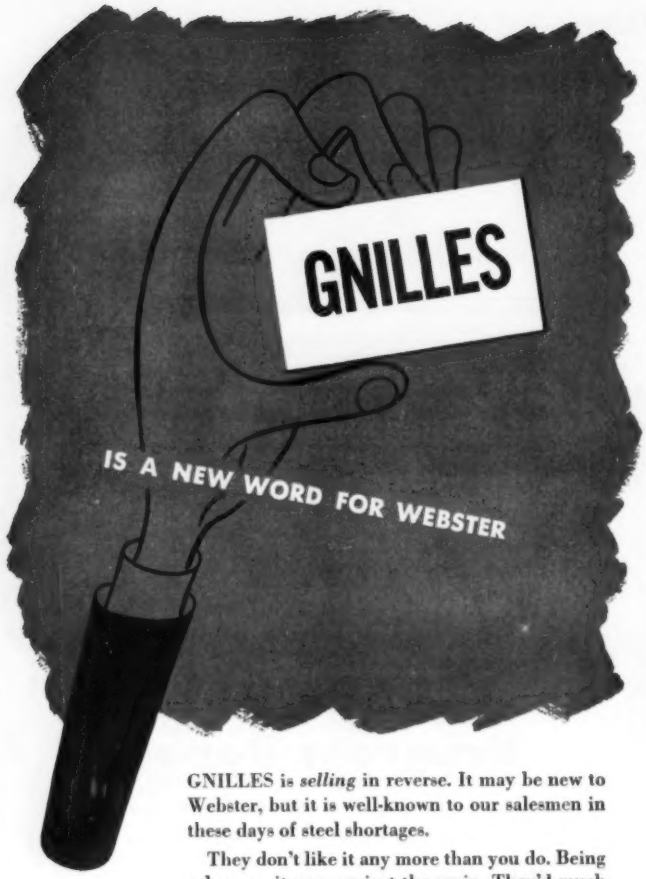


GNILLES is *selling* in reverse. It may be new to Webster, but it is well-known to our salesmen in these days of steel shortages.

They don't like it any more than you do. Being salesmen, it goes against the grain. They'd much rather be out there selling.

But today, that's out. So they are devoting their time trying to keep customers satisfied; helping them to arrive at suitable substitute steels; advising them on availabilities; keeping up with latest government regulations; helping make allocations on a fair and equitable basis.

They are anxious to help you in any way they can, so feel free to call on them and us.

Our Warehouse Division is guided by the same business principles which have carried Atlantic Steel Company through fifty years of progress.

50th ANNIVERSARY ATLANTIC STEEL COMPANY 1901 1951

Quality steel products since 1901 DIXISTEEL

WAREHOUSE DIVISION
Atlantic Steel Company
ATLANTA, GEORGIA • EMERSON 3451

finer print-cloth fabrics. Not much trouble is found if the construction is coarser than 80 square. Generally, tight selvages can be corrected in these ways: reduce vibration of the temples; keep ends straight with uniform tension in the slasher room; spin yarn with higher twist; use a ply selvage; reduce the number of ends in the selvage.

Slasher speeds are limited by the drying capacity, according to one mill man. He said that size formulas, weight of the roll, and type of covering on the rolls can be balanced against the pickup of size as the yarn passes through. He said that you can do a good job of slashing at almost any speed and that the limiting factor is the drying capacity. Some trouble is encountered in controlling the tension on the beams and splitting. Another mill man reported that he is slashing 80-square print cloth at 80 yd. per min.

Higher slasher speeds give more size pickup. One mill cut down the viscosity of the size to keep the pickup even when slasher speeds were increased.

▶ **Slasher cloth** made of nylon and wool blends gives good results in several mills. One mill man said that the life of the cloth is increased 10 to 20%.

▶ **Rusty selvages** are sometimes caused when you use two-ply yarn for selvages and it does not dry as well as the body of the warp. Here are several suggestions to eliminate this condition: paint the beam heads and keep them protected; apply parafin wax in block form to the loom-beam heads when you start up; run selvage ends around the small cylinder twice to dry them better; use infra-red lights on the selvage ends to dry them out.

▶ **Slack selvages** on Model X looms can be reduced, according to one mill man, by cautious loom fixing. The Model-X loom has two cloth-roll springs on the shaft, and these springs are hard to set to the same tension. A panel generally agreed that you will have slack selvages on a heavy fabric and that anything that causes more tension on one side than on the other is going to cause a tight selvage on one side and a slack selvage on the other.

▶ **Steam cleaning** reportedly ruined the wood and leather parts on looms at one mill. Most mill men questioned did not think that steam cleaning was practical.

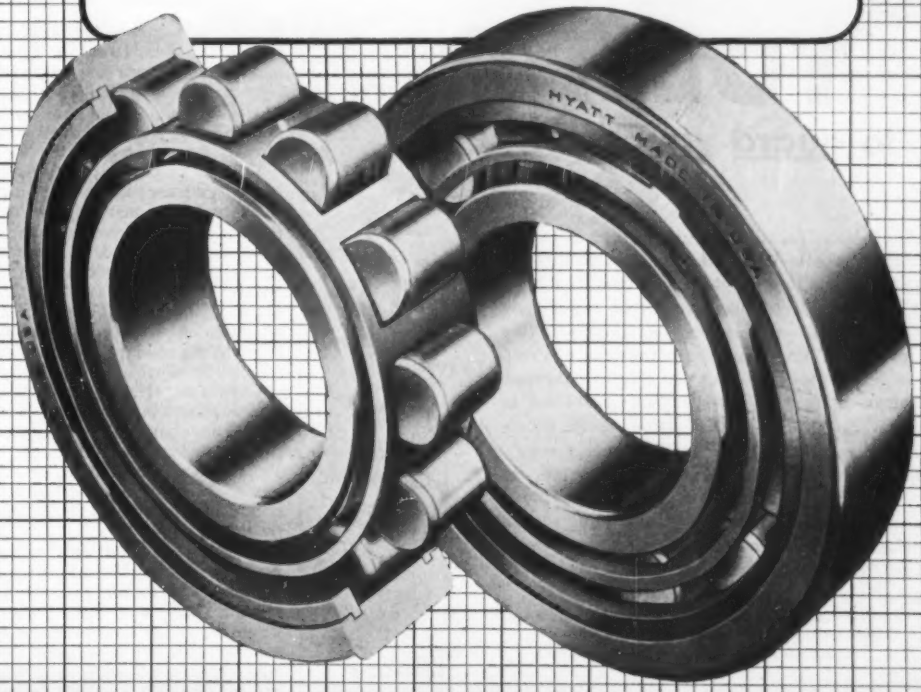
▶ **Overhead cleaners** for looms are eco-

Watch-like precision... plus years of durability

That's the winning combination that has earned the textile industry's preference for Hyatt Roller Bearings.

Looms, preparatory and finishing machinery, with Hyatt Roller Bearings built in, help make possible continuous day-after-day operation with no down time due to bearing failure.

Many makes and kinds of textile machinery standardize on Hyatt Roller Bearings, and Hyatts may be had in most other equipment too, when you specify these precision-built durable bearings. Hyatt Bearings Division, General Motors Corporation, Harrison, N. J.



HYATT ROLLER BEARINGS

 For more information, write direct or use Reader Service post card.

1901-1951

50th Anniversary

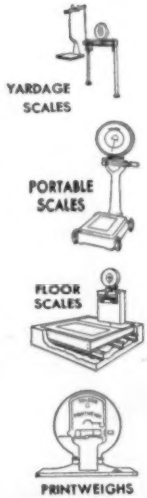
Today, more than ever, you can look to

TOLEDO

to guard your costs better!

After you've fought the battle of high costs and shortages—don't waste textile materials through careless handling! Tighten your control at every step! See that you have up-to-date scales—and enough scales—throughout your textile handling operations. Look into the advantages of Printweigh in stopping losses that originate through human errors. Whatever your problems in receiving, production, shipping, stock rooms and many other textile weighing operations . . . there's a modern Toledo to do a better job.

Today in your community you'll find Toledo as near as your phone; Toledo sales and service offices in more than 200 cities ready to help you in the selection or maintenance of scales vital in guarding your materials and costs.



Write for a copy of our 50th Anniversary Brochure . . . helpful information on modern Toledo equipment.

TOLEDO SCALE COMPANY

TOLEDO, OHIO . . . Toledo Scale Company of Canada, Ltd., Windsor, Ontario

HEADQUARTERS FOR SCALES

For more information, write direct or use Reader Service post card.

nomical, according to one mill, if you are now spending over $30.00 or $40.00 per year per loom for cleaning. This figure includes everything; sweepers, blow-off men, and harness cleaners. A survey showed that mills spend from $10.00 to $200.00 per loom per year for cleaning. The highest cost of cleaning is in the fine mills.

► **Preventive maintenance** by loom fixers was thought by a panel to be better than an outside crew overhauling looms periodically. One man stated that if you are going to overhaul a block of looms, you should use your own men because the experience they gain will be useful in your own plant.

► **Endless check** straps were reported to run well on X-2 looms. According to tests conducted in one mill, they will last as much as three times as long as the regular check straps.

Gurney Yarn Quality

(*Continued from page 100*)

of these two factors will help maintain high-quality yarn. It has been found that variation in yarn sizes in the same knitted fabric results in dyeing streaks. Therefore, uniformity in yarn size during processing is stressed so that uniform dyeing will be obtained.

The mill produces 16s to 30s yarn, both for shipment and for its own use.

The system of matching card-room production with spinning-room demand has been found to have many advantages in the maintenance of yarn quality. In order to carry through on this program, the cards operate from a maximum of 7½ lb. per hr. down to a point to maintain production at the spinning-room rate.

Cleanliness of yarn is maintained through a system of rigid waste control. This cleanliness not only constitutes freedom from dirt and oil, but also freedom from lint, fly, or other forms of dirt that would lower the standard the mill has set for high-quality yarn.

Weighing waste at each machine has brought about better machine adjustment and maintenance of high machine efficiency. Each operator weighs his or her own waste and files a report with the department supervisor. A careful check is maintained; and any deviation is quickly detected, causes determined, and corrections made.

Since this procedure of waste control was instituted, the amount of waste has been reduced at least 50%.

Here's Your Answer

To Scientific Utilization of Reworkable Waste

IT'S the *new* 24" Fiber Meter for existing Fiber Meter Automatic Blending Systems or incorporation in new installations.

Basically, it is a smaller counterpart of the 36" Fiber Meter. Since waste, however, should properly be only a small percentage of the overall blend, this unit accurately weighs out increments of as little as 2 ounces of waste while each of the larger Fiber Meters in a system is delivering its 8 to 32 ounces of one of the component fibers.

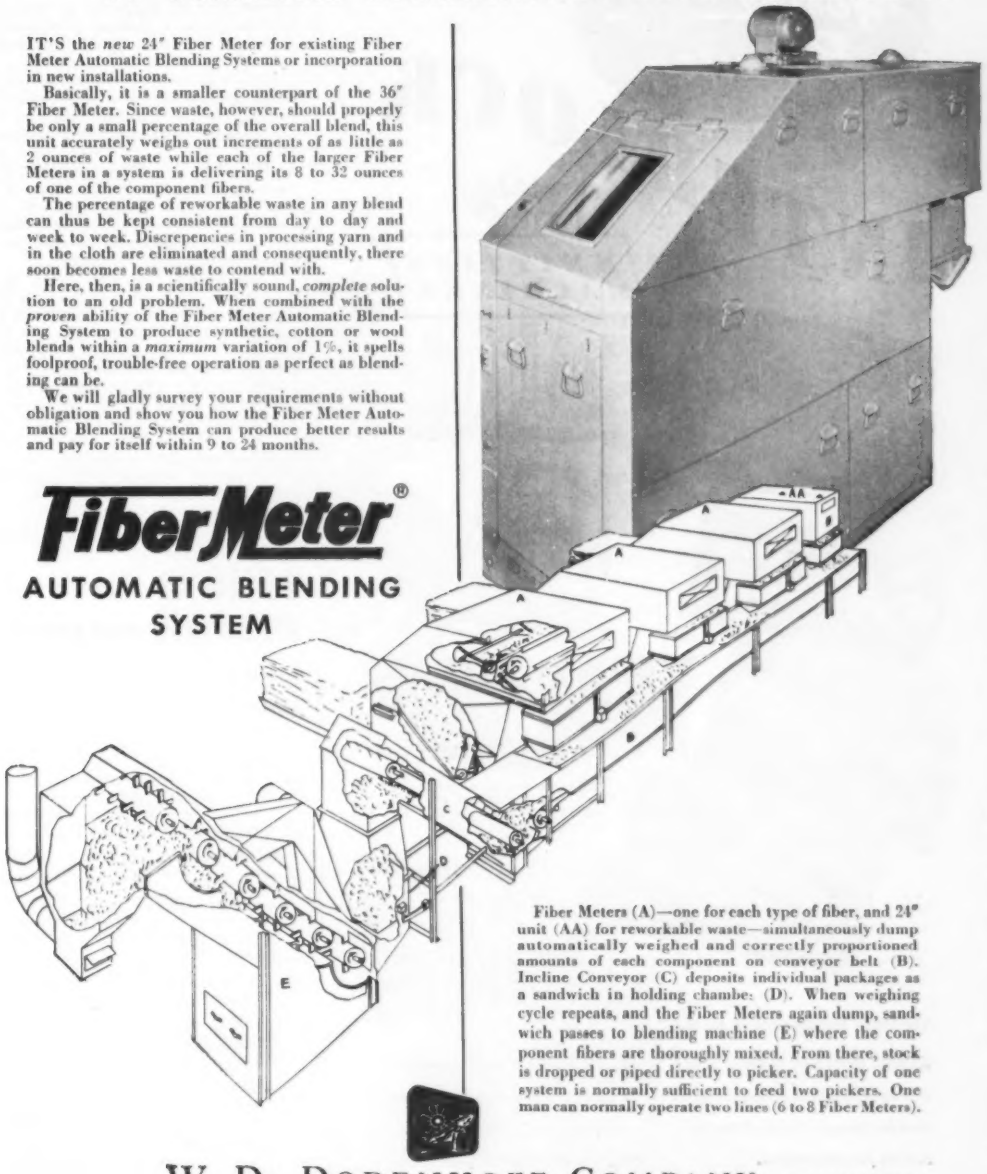
The percentage of reworkable waste in any blend can thus be kept consistent from day to day and week to week. Discrepencies in processing yarn and in the cloth are eliminated and consequently, there soon becomes less waste to contend with.

Here, then, is a scientifically sound, *complete* solution to an old problem. When combined with the *proven* ability of the Fiber Meter Automatic Blending System to produce synthetic, cotton or wool blends within a *maximum* variation of 1%, it spells foolproof, trouble-free operation as perfect as blending can be.

We will gladly survey your requirements without obligation and show you how the Fiber Meter Automatic Blending System can produce better results and pay for itself within 9 to 24 months.

FiberMeter®

AUTOMATIC BLENDING SYSTEM



Fiber Meters (A)—one for each type of fiber, and 24" unit (AA) for reworkable waste—simultaneously dump automatically weighed and correctly proportioned amounts of each component on conveyor belt (B). Incline Conveyor (C) deposits individual packages as a sandwich in holding chamber (D). When weighing cycle repeats, and the Fiber Meters again dump, sandwich passes to blending machine (E) where the component fibers are thoroughly mixed. From there, stock is dropped or piped directly to picker. Capacity of one system is normally sufficient to feed two pickers. One man can normally operate two lines (6 to 8 Fiber Meters).

W. D. DODENHOFF COMPANY, *INCORPORATED*

TEXTILE MACHINERY DIVISION

619 Rutherford Street, Greenville, S. C.

Representative: Midwest—Jack L. Edington, 18954 James Couzens Drive, Detroit 27, Michigan

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British craftsmanship at its finest

Mellor Bromley 1851

INTERLOCK

KNITTING MACHINES

4RL SERIES INTERLOCK MACHINES BUILT WITH MULTIFEEDERS FOR CONTINUOUS INTERLOCK OR WITH AUTO-CHANGE FOR FANCY PATTERNED FABRICS.

The Mellor Bromley range of top-line machines covers most classes of underwear and outerwear fabrics and garments. *Send for illustrated leaflets of the types* in which you are interested.

***Here are five of the principal plants of the Mellor Bromley group in England,* employing some 3,000 workpeople—many with 25, 40 and 50 years service.**

MELLOR BROMLEY & CO. LTD
LEICESTER · ENGLAND

New Dyes and Chemicals

(*Continued from page 150*)

The dye is said to have good resistance to chlorine; crocking; hot, moist pressing; washing; and to both cold- and salt-water spotting. Ponsol Yellow 5GLL paste is recommended for application to materials intended for use in dress goods, draperies, sportswear, and similar articles where good light fastness is the major requirement.

Here are its fastness properties: light (2.0 oz. per gal.), 6; light (8.0 oz. per gal), 6; crocking (dry), 5; crocking (wet), 5 to 4; dry cleaning (Perclene), 3W; washing AATCC #3, 5 to 4W; washing AATCC #4, 3W; chlorine (0.3% available), 5 to 4W; peroxide bleaching, 1W; caustic soda at 180° F., 1W (cotton is unstained); caustic soda at 180° F. with Sitol, 1RW (cotton is unstained); water spotting, 5; pressing (hot-moist), 5 to 4D.

Ponsol Yellow 5GLL paste can be applied to packages, beams, and raw stock by the pigment method and reduced with a concentration of 1 oz. per gal. each of caustic soda and Du Pont hydrosulphite conc. It is reduced and dyed at 120° F., and the reduction volume is based on 1 gal. of water per pound of color. It has very good stability in the reduced form at 120° F. and shows a negligible effect on the shade and strength after standing 2 hr. It can be applied satisfactorily by pigment-pad or reduced methods.

Mill Maintenance

Moisture Causes Many Electric-Motor Failures

Moisture caused more than 13% of the electric-motor failures recorded by a boiler inspection and insurance company in 1949, according to a report in *Maintenance News*, published by Westinghouse Electric Corp.

According to the analysis, dyehouses were included in the types of plants that had the highest ratio of motor failures caused by moisture. The study revealed the main causes of failure due to moisture as:

1. Careless handling of liquids
2. Overflowing liquid tanks
3. Damp atmosphere and poor ventilation
4. Leakage of packing glands of motor-driven pumps
5. Broken pipes and choked drains
6. Failure to dry out windings after prolonged idle periods.

Most of these failures can be eliminated with good plant maintenance. Clean-up personnel can be instructed to keep water away from the motors. Instances were reported where clean-up personnel played streams of water

Where quality

is the

first consideration

in a fabric

there is

no substitute for

Celanese®

Acetate Rayon Yarn

*Reg. U. S. Pat. Off.

CELANESE CORPORATION OF AMERICA, 180 MADISON AVENUE, NEW YORK 16, N. Y.

DARNELL CASTERS

Let the skill of Darnell engineers furnish the sources of profit in caster use. There are valid reasons for Darnell leadership. In every Darnell Caster and Wheel there is a responsibility that is reflected in maximum

EFFICIENCY

Always SWIVEL and ROLL

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directly on motors through sheer carelessness.

If dyetubs, softener tanks, etc., are equipped with overflow drains, burnouts will not be caused by the liquids overflowing on the floor and motors.

Motors can, in many instances, be relocated if they can't get proper ventilation where they are. In other cases, drip-proof, splash-proof, or totally enclosed motors can be used to prevent damage by moisture.

Damage caused by broken pipes, choked drains, and packing leakage can be reduced by preventive maintenance. A good maintenance man will catch most potential failures before they happen.

Moisture absorption during idle periods can be prevented, to a large degree, if machine temperature is kept above the condensation point. The American Institute of Electrical Engineers can recommend to you a formula to determine the amount of heat required to maintain the proper temperature.

Useful Accessories for Textile Mills

► To request further information on any item, please use the card in the Reader-Service dept.; refer to the number at the end of the item concerned.

Air Circuit-Breaker

A new, low-voltage, air circuit-breaker, the DB-50, has been announced by Westinghouse Electric Corp., 303 Fourth Ave., Pittsburgh 30, Pa. The DB-50 has an interrupting capacity of 50,000 amp. for application in low-voltage industrial and commercial power-distribution systems, in central-station auxiliaries, and for motor-starting duty and similar uses. The DB-50 features a completely new air-delayed series over-current tripping device, with all elements completely adjustable. The unit provides long-time delay on overloads and instantaneous tripping of faulty currents. (U-1)

All-Purpose Thermometer

Featuring a stainless-steel case, designed to be more rigid and last longer than conventional types, a new thermometer, TAG model-8689, has been announced by Tagliabue Instruments Div., Weston Electrical Instrument Corp., Newark 5, N. J. The thermometer is designed for use wherever an accurate, dependable thermometer is needed regardless of weather or other conditions. The scale is large, clear, and easy to read, and can be obtained in five different types ranging from —40° F. to 400° F. Wide open spaces around the bulb ensure maximum air circulation for accurate readings. (U-2)

Compact Strapping Tool

A new tool for pulling strapping tightly

Make-up Pay Reduced 43%
AT MAGNET MILLS
BEFORE O.V.S. PROGRAM
AFTER O.V.S. PROGRAM
MAKE-UP PAY
MAKE-UP PAY 43% LESS
Writes G. Luther Weibel,* Personnel Director, Magnet Mills, Inc., Clinton, Tenn.: "In our industry training costs are high, and training periods quite long. In our seaming department we find it takes approximately nine months before a specific satisfactory production standard is obtained. Prior to adoption of our vision program, it took 43% more make-up pay to train a seamer than it does today. At the same time, under our vision program, seamer learners at the end of nine months produce 22% more work."
*Reprint of Mr. Weibel's complete article available on request.
BAUSCH & LOMB
OCCUPATIONAL
VISION SERVICE
Case History

A PROVED METHOD

To help your plant make money 9 Ways!

It's a matter of record that 4 of every ten industrial workers are visually unqualified for satisfactory performance on their jobs (established by the records of millions of visual performance tests of industrial workers in more than 4,000 different job categories). When visual skills are correlated to job requirements, working efficiency is notably increased. The Bausch & Lomb Occupational Vision Service is a scientific method for meeting this problem of "Eyes for the Job." *Employee participation is voluntary...and workers like the program.* Benefits which accrue in plants using O.V.S. (benefits which can accrue in *your plant,* too) include:

1. **Improved quality of production**
2. **Increased production per worker**
3. **Reduced waste of materials and work rejects**
4. **Improved accident record**
5. **Reduced labor turnover**
6. **Lowered training cost**
7. **More effective placement**
8. **Reduced absenteeism**
9. **Improved employee relations**

MAIL TODAY!

Send for the brochure "Eyes Right for the Job," which tells what the Bausch & Lomb Occupational Vision Service is, how easily it can be administered in your plant, and at what low cost.

BAUSCH & LOMB OPTICAL CO.
632-7 St. Paul St., Rochester 2, N. Y.

Please send me the brochure "Eyes Right for the Job," and complete details on the Bausch & Lomb Occupational Vision Service.

Name ..... Title .....

Company .....

Street ..... City ..... Zone ..... State .....

More and more mills are converting to...

HYDRO-WYND

The HYDRO-WYND is so automatic in delivering even tension—even lineal speed that you can forget it in operation. Unit consists of hydraulic coupling and planetary gear set which never need adjusting when once regulated for pre-determined results.

Mills which a year ago entered "pilot" model orders for Twin Disc HYDRO-WYND Drives today are converting entirely to this most modern of all even-tension even-speed winding devices.

And it's no wonder when you consider all the advantages.

Pre-determined tension is *automatically* held throughout the *entire* roll build-up. *There are no adjustments to make.*

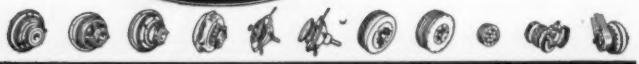
You don't have to worry about quality or trouble at the start or at the finish for the HYDRO-WYND eliminates all jerkiness in the winding cycle. The load is picked up smoothly because the motor can accelerate quickly to develop torque as the load is applied.

And, the HYDRO-WYND is so simple you'll be surprised at how little maintenance it will ever require.

Equip one machine with a HYDRO-WYND Drive today—at a relatively small cost. You'll be converting *all* your slashers, tenter frame batchers, dye jigs, calenders, inspection frames, button breakers, and numerous textile machines to HYDRO-WYND Drives tomorrow. For complete information on the most modern of all tensioning devices, write today for complete details.

TWIN DISC
CLUTCHES AND HYDRAULIC DRIVES

Clutches & Hydraulic Drives



TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

BRANCHES: CLEVELAND • DALLAS • DETROIT • LOS ANGELES • NEWARK • NEW ORLEANS • SEATTLE • TULSA

around any sized or shaped object has been developed by A. J. Gerrard & Co., 1950 Hawthorne Ave., Melrose Park, Ill. The new tool, the No. 120 Steelbinder, operates like a larger tool except that it does not cut off surplus strap as a part of its binding action. Severing the surplus strap is performed as a separate operation with the Steelbinder hammer cutter. The tool is compact enough to slip into an overalls pocket when not in use and can be used on steel strapping sizes ranging from ½ to ¾ in. in width. (U-3)

Meter-Manifold Unit

A new compound meter-manifold unit to solve the problem of proper meter maintenance without costly shutdowns or extra-hour work has been introduced by the Rockwell Mfg. Co., 400 North Lexington Ave., Pittsburgh 8, Pa. The manifold assembly consists of two Pittsburgh-Empire single-register compound meters in combination with four Nordstrom lubricated plug valves and two 8-in. reducing manifolds, so arranged that, for maintenance, one side may be shut down at a time without complete interruption of service. (U-4)

Corrosion-Resistant Fittings

A new development of welding fittings and joints for corrosion-resistant coated piping has been announced by Welstrom, Fifth St. and North Ford Blvd., Hamilton, Ohio. The new fittings and joint are said to eliminate the failures of mechanical-type joints caused by vibration and expansion and contraction. The fittings and joints are available in standard sizes and types of welding fittings and joints from ½ in. up to 30 in. in diameter for piping systems handling many types of corrosive solutions. (U-5)

Flow-Signal Transmitter

The high-pressure flow signal, a pneumatically operated flow-differential measuring unit that transmits proportional signals to remote recording or indicating instruments, or to automatic control units, has been announced by Hagan Corp., Hagan Bldg., Pittsburgh 22, Pa. The new transmitter is reported as being applicable to many conditions of operation in steam plants and other fields. Measurements can be made of flow differentials of liquids, gases, or vapors, or for static pressure or liquid level. (U-6)

Glare-Reducing Paint

A new glare- and heat-reducing glass paint has been developed by Rex Supply Co., 142 South Highland Ave., Ossining, N. Y. According to the manufacturers, Sunshade Blue paint dries rapidly to make a weather-proof frosted coating which not only cuts down glare but is also heat-reducing. The paint may be applied with either brush or spray-gun. The soft blue shade is said to be relaxing and to relieve eyestrain and tension in workers. (U-7)

Hydraulic Remote Control

A new hydraulic remote-control system has been announced by Superdraulic Corp., 14256 Wyoming Ave., Detroit 4, Mich. The complete remote-control system consists of a master unit and a slave unit interconnected by two small tubes. It is said

SEE SUPREME'S SUPER-RIBBER ADVANTAGES

Through A Knitter-Mechanic's Eyes

★ **GIVES MULTI-MACHINE PRODUCTION WITHOUT "KNOCKING ITSELF OUT"**

Up to 56 Yards Per Hour from a *single* machine . . . Max. feeds per diameter inch means profit boosting production without machine-busting rpms. Less wear — less down-time — longer machine life.

★ **SIMPLER TO RUN AND MAINTAIN**

Flip-of-the-finger stitch adjustment . . . Open, easy-to-get-at knitting system . . . Individual, channeled cams —no chance of smash-ups . . . Direct, convenient, man-to-machine controls . . . Foolproof synchronization of dial to cylinder needles . . . Easier for new, inexperienced operators.

★ **HAS QUICKEST, EASIEST, SWITCHOVER FROM PLAIN TO SWISS RIB**

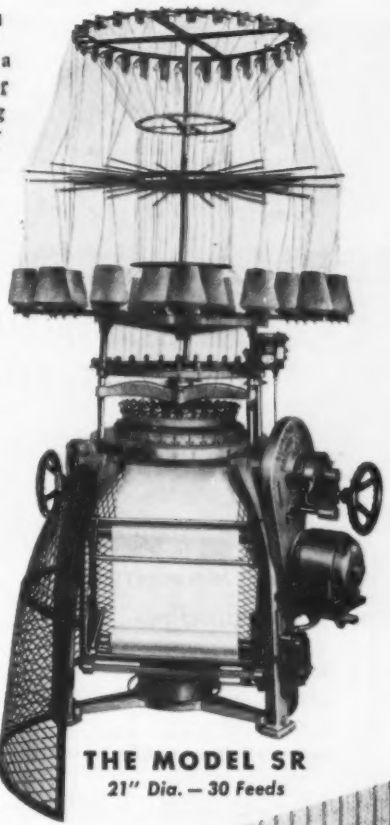
Exclusive, new method eliminates changing cams — gives immediate switch.

★ **KNITS "SUPER ELASTIC" QUALITY RIB CLOTH FROM PRACTICALLY ANY YARN**

Handles wide range and variety of yarns with minimum adjustments. Minimizes damages from weak or slubbed yarns. Uniform, high elasticity gives better size and shape retention. Dogless—no pinch lines.

★ **HAS SUPREME'S PROVEN-IN-THE-MILL FEATURES**

Sturdy, tripod construction . . . Trouble-free design and anti-wear engineering . . . Stationary Yarn Stand . . . Revolving, floating take-up and roll-up . . . Rugged, smooth-running unit motor drive. Patented multi-disc clutch . . . Starts easy . . . Stops fast.



THE MODEL SR

21" Dia. — 30 Feeds

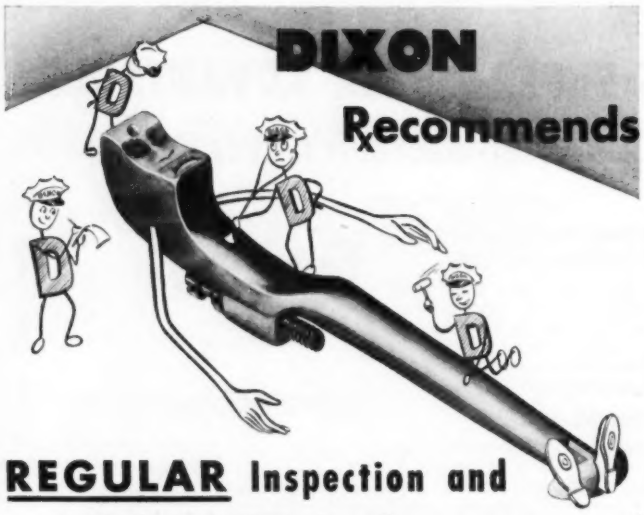
The Supreme Model SR is available in a complete range of sizes from 7"— 10 feeds to 30"— 84 feeds. For further details, write for free folder

SUPREME

KNITTING MACHINE CO., INC.

107 JOHNSON AVE. BROOKLYN 6, NEW YORK, N. Y.

Southern Representative and Showroom:
The Mallack Co., 711 S. Tryon St., Charlotte, N. C.



REGULAR Inspection and PLANNED Replacement of Worn Saddles

Institute a program of inspecting each frame twice a year. Worn saddles, like travelers, must be replaced on a regular schedule. Mills report these:

Proven Advantages

- ✓The program pays for itself
- ✓Yarn imperfections are reduced, efficiency increased
- ✓Newest type saddles gradually replace less efficient models
- ✓Incorrect saddles, faulty weighting installations are eliminated
- ✓Spinning frames are rejuvenated without extensive shut-downs
- ✓Damaged top rolls eliminated
- ✓Maintenance costs are lowered

Ask how the newest Dixon saddles fit into a regular replacement schedule.

DIXON LUBRICATING SADDLE CO.
Established 1876

Southern Sales: R. E. L. Holt, Jr. & Associates, Box 1474, Greensboro, N. C Covering the Carolinas and Virginia
J. W. Davis, Mfg'rs. Agent, Box 745, Columbus, Ga. Covering Georgia, Alabama, Mississippi, Louisiana and Tennessee
Northern Sales: W. R. Potter, Sales Manager, Dixon Lubricating Saddle Co., Bristol, R. I. Covering New England

to have a positive load-carrying ability in both directions because its operation is not dependent upon springs, compressed air, or valves. The system is designed to eliminate all the disadvantages of backlash, wear, and lubrication, and to give smoother operation and greater rigidity under load. (U-8)

Machine-Leveling Jack

A newly designed leveling jack has been announced by the Enterprise Machine Parts Corp., 2731 Jerome Ave., Detroit 12, Mich. It is stated that the Empco jack, style JS, will support 20 tons and lift 8,000 lb. without excess strain on the wrench. The jack either raises vertically or lowers. Change of direction is made by simply turning the adjusting nut to right or left. An anchor-bolt hole through the jack assembly allows clearance for a ¾-in.-diameter bolt. It is thus possible for the jack to be located at the precise point where equipment will be best supported. (U-9)

New Service Tap

A new electrical-service tap designed for heavy-duty service connections for both inside and outside use has been announced by O. Z. Electrical Mfg. Co., Inc., 262 Bond St., Brooklyn, N. Y. The casting swivels to permit easy insertion of conductors, and the construction is such that it keeps the tap assembled when the clamp is open. Serrations on both body and cup are said to prevent cables from working loose after the tap is installed. Conductors are forced into high-pressure contact by means of two standard hex-head cap screws. Smooth, rounded edges permit easy taping. (U-10)

Odor Counteractors

A new line of industrial odor counteractors called "Reductors" has been announced by Airkem, Inc., 241 East 44th St., New York 17, N. Y. New Reductor formulations have been developed to work against the highly unpleasant odors caused by many manufacturing processes. The formulations follow the basic odor neutralization principle of opposing odors that has already worked so successfully in the reduction of many disagreeable odors. Objectionable odors that persist in certain consumer products are reported to be effectively and permanently neutralized. (U-11)

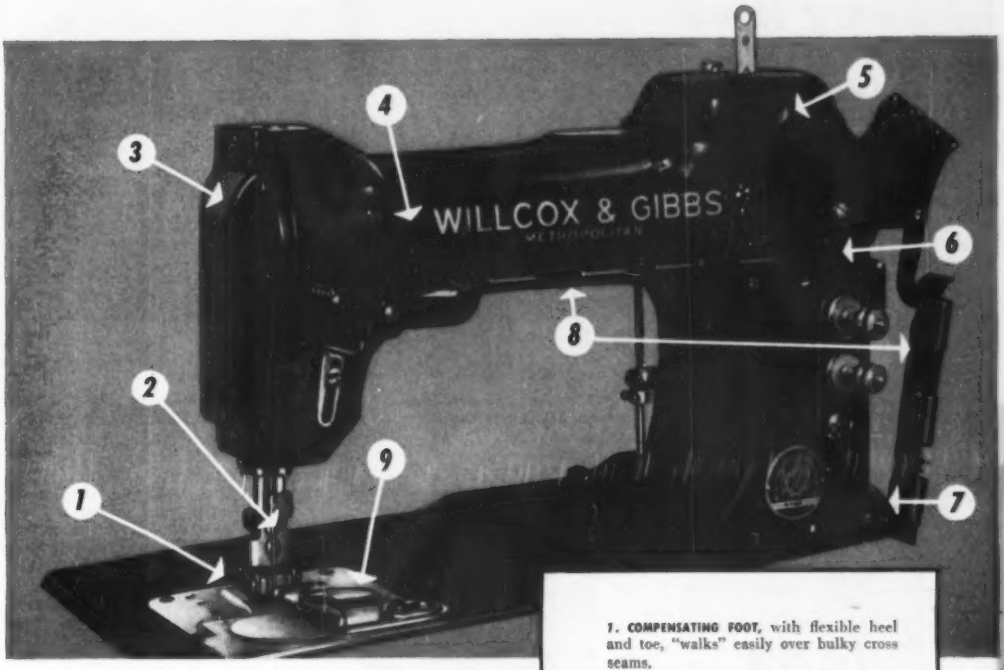
Wood-Refuse Burner

An automatic, multi-burner combustion system for burning wood refuse has been announced by Fyr-Feeder Engineers Div., American Coal Burner Co., 18 East Erie St., Chicago 11, Ill. The Fyr-Feeder automatic multi-burner system is designed to burn wood waste effectively and to reduce fuel cost greatly for small boilers. According to the manufacturers, sawdust, wood chips, hogged wood, and other wood wastes can be used economically in the average furnace with a few Fyr-Feeder modifications and adequate stoker equipment. (U-12)

Automatic Batch Counter

An improved counting instrument, the Monitor automatic batch counter, has been announced by Production Instrument

Here's why the "W&G" Type 1101 has no equal for
SUSTAINED HIGH-SPEED PRODUCTION



The Improved Design Features of this New Machine Assure Faster, Easier and Better Production — at Lower Over-all Cost

If you're looking for a two-needle, lap-seam felling machine that will give you higher speeds, greater precision, easier operation and longer, trouble-free service, *this is it.* Actual on-the-job performance has proved its superiority again and again — for sleeve setting operations on shirts, dresses, pajamas and lap-seam felling on any type of garment made of light or medium weight material. It is also widely used for side and rod hemming on curtains and drapes, as well as barrel hemming on curtain ruffle.

For complete information, ask for your free copy of Bulletin No. 936.

WILLCOX & GIBBS
Sewing Machine Co.

214 West 29th St., New York 10, N.Y.

1. **COMPENSATING FOOT,** with flexible heel and toe, "walks" easily over bulky cross seams.

2. **IN-LINE NEEDLES** permit even starting and finishing of seams — accurate margin control.

3. **NEW FRAME** with large removable cover plates saves down time for inspection and servicing.

4. **ARM SHAFT,** in perfectly balanced eccentric sleeve bearing assembly, minimizes noise and vibration.

5. **POSITIVE LUBRICATION SYSTEM** eliminates hand oiling. Reservoir feeds filtered oil to each bearing by capillary action.

6. **INTERNAL BELT DRIVE** of wire-reinforced composition, has extra strength and durability for heavy-duty service.

7. **SINGLE HAND WHEEL** with improved belt guard gives added safety — simplifies threading, starting and stopping.

8. **THREAD GUIDES** with built-in separators prevent whipping or snarling of threads.

9. **ADJUSTABLE FOLDER** permits accurate edge control for close stitching.

STEEL

Every Kind

Some steel products are in short supply but over-all stocks are still large, diversified

Plates, Structurals, Bars, Sheets, Tubes, etc. . . . Carbon, Alloy and Stainless Steels . . . .

RYERSON

Joseph T. Ryerson & Son, Inc. Plants: New York, Boston, Philadelphia, Detroit, Cincinnati, Cleveland, Pittsburgh, Buffalo, Chicago, Milwaukee, St. Louis, Los Angeles, San Francisco

96 Years Experience in TANK DESIGN

• For almost a century Cole elevated tanks have provided a dependable water supply for mills and communities. Cole quality is assured by careful, experienced designing and watchful supervision from blueprint to finished tank. Send us your inquiries for tanks from 5,000 to 2,000,000 gallons—stating capacity, height to bottom, and location. Write for latest Cole catalog—"Tank Talk."

R. D. COLE MFG. CO.

NEWNAN, GA. Established 1854

TANKS TOWERS CYLINDERS VESSELS

Co., 704 W. Jackson Blvd., Chicago 6, Ill. The unit is designed for continuous counting of pre-selected batch quantities at high speed, without interrupting production and without missing a single count. Each Monitor counter is completely self-contained and is equipped with terminal strip for all outside wiring connections. (U-13)

Chemical Feeder

A new, positive-displacement, duplex diaphragm pump has been announced by Proportioneers, Inc., Providence, R. I. Model 2-47CF Constaflo chemical feeder is equipped with a "See-Thru" plastic reagent head and is driven by a ¼-hp. motor. The recommended delivery range is from 1.0 to 15 gal. per hr. The Constaflo is designed to draw solutions or slurries from a container and to force them into a line or vessel under pressures up to 100 psig. The design, and the mechanism box that encloses all moving parts in an oil bath, are said to make the Constaflo a heavy-duty unit for feeding a large variety of liquids at temperatures up to 100° F. (U-14)

Electric Dial Taper

A power-operated dial taper has been announced by Marsh Stencil Machine Co., Belleville, Ill. The new series-3D dial taper is operated from a 110-v. lighting circuit and has finger-tip control, automatic measuring, moistening, and accurate cut-off. The tape length required is dialed easily. A piece of tape is measured accurately, is cut off cleanly, and is moistened with hot water ready to be applied to the carton without rubbing. The taper is designed to speed up taping and to save wasted tape by giving at all times the exact length of tape required. (U-15)

TEXTILE *Equipment* NEWS

(Continued from page 148)

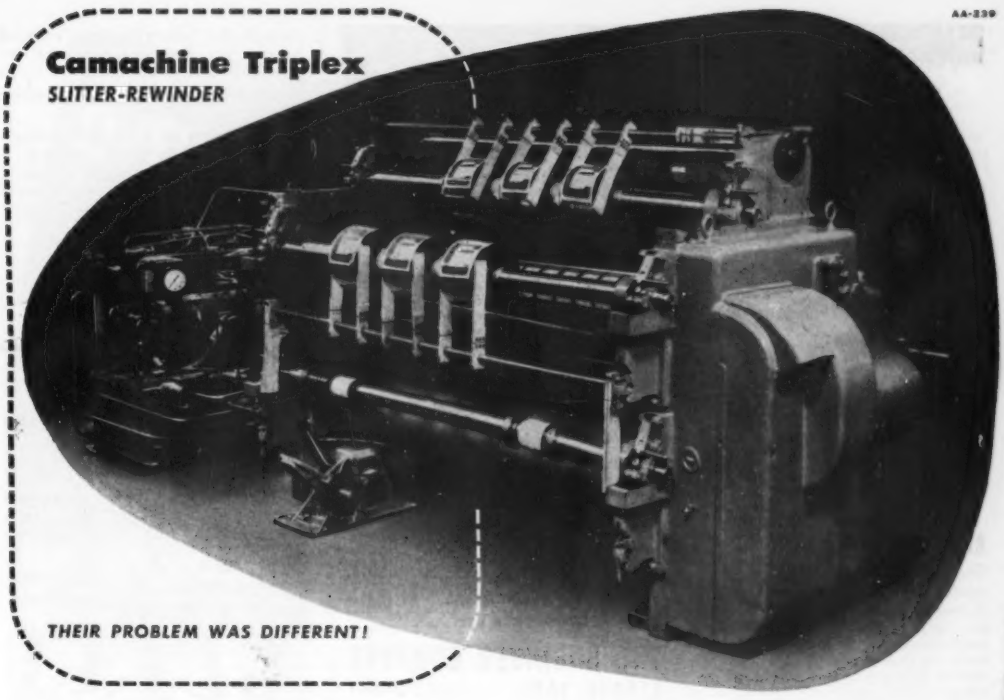
Lint-Resisting Starter Has No Knockout Holes

A new Life-Linestarter, available in NEMA sizes 1 to 5 with ratings up to 200 h.p., 440-v. polyphase, has been announced by Westinghouse Electric Corp., Box 2099, Pittsburgh 30, Pa. The unit is designed to meet requirements of J.I.C. Standards for Industrial Equipment and the Machine-Tool Electrical Specifications (as modified by the Mass Production Industry Electrical Specifications).

To keep out dirt, oil, and splashing coolant, the starter's NEMA type-12 enclosure has a continuous neoprene gasket and is mounted by external brackets. There are no knockouts or mounting holes in the box itself. The breaker is operated by a

AA-239

Camachine Triplex
SLITTER-REWINDER



THEIR PROBLEM WAS DIFFERENT!

when you must depend on experience . . .

A large producer of acetate film ordered a battery of high-speed slitter-rewinders to use in processing their product. Characteristics of the material called for highly sensitive web tension control throughout the slitting and rewinding operation, and for razor-clean slitting. Provision had to be made for producing rolls of uniform density regardless of variations in the caliper of the material. Since core heat would ruin the inner laps of the rewound rolls it was necessary to minimize heat generated by friction between core and rewind shaft. Other requisites included: positive roll separation; trim rewind for salvage; 15″ diameter rewind and speed of 800 feet per minute. And no complicated gadgets — the machines had to be designed for economy, simplicity, durability and low-cost maintenance.

. . . you can depend on Camachines®

The new Camachine Triplex slitter-rewinder was specifically developed to meet the requirements outlined above. The Triplex is a *new* machine, designed to meet a *new* set of operating conditions, and featuring several *new* principles in slitter-rewinder engineering. The Triplex is *new*, yes, but its design is deeply rooted in Cameron Machine Company's sixty years of specialization and leadership in the manufacture of roll production equipment. The new Triplex has proved again that when you have to depend on experience you can depend on Camachines!

For complete information write to:
Cameron Machine Company • 61 Poplar Street • Brooklyn 2, N. Y.

THIN BOILING AND TEXTILE STARCHES

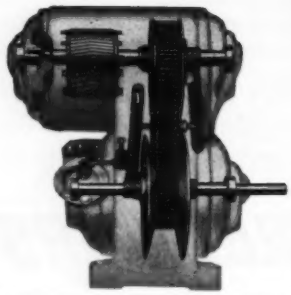
Absolutely uniform and dependable. Careful quality control assures maximum performance in your mill.

THE HUBINGER COMPANY
KEOKUK, IOWA · · EST. 1861

AT YOUR SERVICE

The Hubinger technical staff and laboratories are widely recognized for their thorough and practical knowledge of the use of starch for textiles. Their experience assures you of the *best* product, *tailor-made* to fit *your specific needs*. Consult us on any production problem—at no obligation, of course.

power modernization



means perfect speed control

STERLING SPEED-TROL

OUTSTANDING FEATURES: Infinite speeds—positive speed regulation—fingertip control—large indicator—positive pulleys—no springs—protected—balanced design—streamlined—Herringbone Rotor—through ventilation—shielded ball bearings—versatile mounting—NEMA dimensions—shock absorbing—quiet operation—rugged—compact—dependable—long life.

Ask for your copy of pictorial bulletin No. B-73 showing Sterling Electric Power Drives Turning the Wheels of Industry.

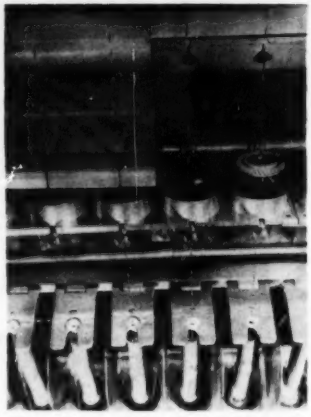
STERLING ELECTRIC MOTORS

Plants: New York 51, N. Y.; Los Angeles 22, California; Hamilton, Canada; Santiago, Chile.
Offices and distributors in all principal cities.

slam-proof, self-indicating external handle, but the enclosure must be opened to reset overload relays, which brings motor overload to the authorized person's attention.

The starters are furnished as standard with a 220/440-v. primary, a 110-v. fused secondary, and a control circuit transformer that can be used on either 220- or 440-v. supply voltage, 50 or 60 cycles.

Device Helps Evenness On Woolen Frames



TWO SMALL ROLLS, which can deliver as well as rotate, are cased in this device. The element is set between the front rolls and the bobbin on a woolen ring-spinning frame.

A new twisting and delivery device for woolen ring spinning frames has been developed by Bremer-Spinnereimaschinenbau, G.m.b.H., Breme-Farge (Germany).

The device puts in and holds a temporary twist in the yarn between the delivery rolls and the bobbin. Evenness is said to be increased, and higher speeds and drafts are claimed.

A pair of small rolls performs a double rotation by means of a differential motion. The rolls deliver and simultaneously rotate to make the preliminary twist. Any roving size is said to be accommodated.

New Humidifier Has Higher Capacity

A new model of heavy-duty, high-capacity humidifier, Hum-O-Zone model 300, has been developed by Daffin Mfg. Co., Lancaster, Pa. The new humidifier uses a high-pressure pump that breaks up water through specially developed nozzles. The unit dispenses a high degree of humidifica-

OVER 500 MILLS USE THEM!

Lick your Tension Problems with Kidde Compensators!

You can stop worrying about losses from uneven tensions when you use a Kidde Compensator. There are three Kidde models designed to meet varied tension problems. Mills all over the country are now using thousands of them.

The Standard Model is specially designed for *moderate* speeds (approximately 300 yds. per minute) and tensions. Use it in quilling nylons and rayons . . . in warping rubber yarns . . . in winding of narrow fabric bobbins.

The Double Disc Model maintains constant tensions at speeds of approximately 1000 yds. per minute. It is excellent for tender, high twist yarns. Available in two types—10 to 140 grams and 100 to 300 grams.

The Warp Model maintains predetermined tensions uniformly on all warp ends. It produces smooth, level beams, eliminating troublesome slack and tight ends. Lost ends can be controlled by use of an available Kidde stop motion.

Fill in and send the coupon for full information on any or all of these effective Kidde tension compensators.

Walter Kidde & Company, Inc.
791 Main Street, Belleville 9, N. J.

Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.

Kidde

Walter Kidde & Company, Inc.
791 Main St., Belleville 9, N. J.

Gentlemen:
Please send me additional information on the Kidde Compensators.

Name_____

Company_____

Address_____

City_____ State_____

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THE ACME OF QUALITY AND UNIFORMITY

CONDENSER TAPES

Our hides are specially selected and prestretched for tape material . . . they are cut to uniform width and thickness and checked by micrometer . . . edges are squared . . . splices are hand made with cement that is laboratory controlled . . . and a smooth plastic finish is applied for protection and long tape life.

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Manufacturers of Leather Textile Specialties Exclusively

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Bendix Friez MAKES the RIGHT INSTRUMENT at the RIGHT PRICE for EVERY JOB!

Model 185 Hygrodial
Precision Humidity and Temperature Indicator
Hair-operated and calibrated to professional standards of accuracy by the maker of the world's finest weather instruments. Handsome, modern case—4" high, 5½" wide, 1⅝" deep.

Model HA/2
Hand Aspirated Psychrometer
Accurate readings obtainable without special skill. Psychrometric readings can be taken at any point desired however inaccessible.

Model 160
Portable Humidity and Temperature Recorder
3" x 5" charts, 10 or 30 hour records. Modern design...handy for small space and difficult locations ...built to meet unusual conditions.

Model 594
Hygrothermograph
The foremost relative humidity recorder for laboratory, factory, and office use. Scientifically designed for accuracy and dependability.

Model 573
Motor Aspirated Psychrometer
Designed to determine wet and dry bulb temperature with laboratory accuracy—Motors supplied for use on 115 V., 50 cycles or 60 cycles.

Model S/1
Pocket Sling Psychrometer
A small, low cost instrument. Thermometers graduated in 1° increments from +35° F to +110° F. Furnished complete with case and psychometric slide rule.

Model 550
Sling Psychrometer
Manufactured to U. S. Weather bureau specifications. Thermometers graduated in 1° increments from −20° F to +120° F. or −35° C to +49° C.

FRIEZ INSTRUMENT
DIVISION OF
BENDIX AVIATION CORPORATION
1418 Taylor Avenue
Baltimore 4, Maryland

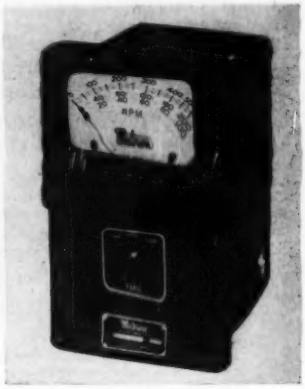
Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

tion over a large area and occupies little space, measuring 22 in. x 26 in. wide x 42 in. high. The atomization capacity has been increased by one-third over the old model 300. Syphoning eliminates the necessity of using the conventional baffle arrangement.

The humidifier is fully adjustable: moisture output may be adjusted to fit individual industrial requirements. The unit is powered by a ¼-h.p. electric motor.

The Hum-O-Zone is a complete packaged unit that operates independently of a heating system and requires only a cold-water supply and a 110-v., a.c. current in most installations. No water drain is necessary because the tank capacity is controlled by a float. Only the water to be used for air humidification is pumped. The automatic control may be mounted on the wall within a radius of 35 ft. of the unit.

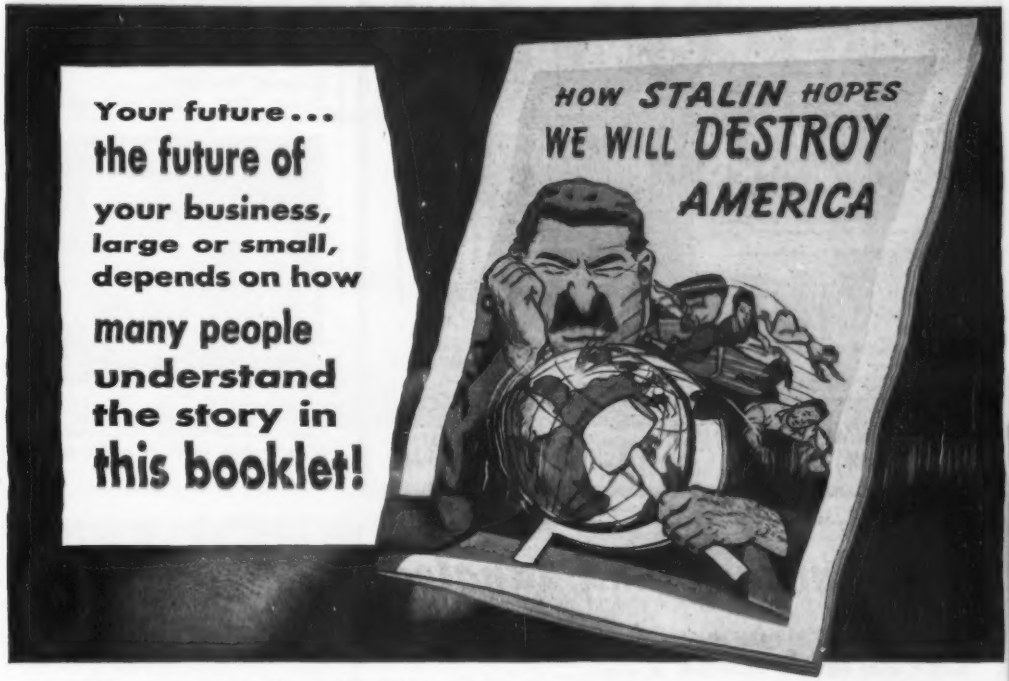
New Wide-Range Indicator



ROTATION OF THE RANGE KNOB of this new tachometer instantly selects one of three speed ranges to measure any speed over a total range of 50 to 1.

A new, three-range, single-head, fixed-installation indicator has been announced by Metron Instrument Co., 432 Lincoln St., Denver 9, Colo. Designed for speed-measuring applications where a wide range is desired, this new instrument, Ceries 42p, can be used with any series Metron tachometer head. The scales are 4 in. long with 100 divisions. Indicator calibration is said to be stable indefinitely and good over a wide temperature range. Scales are supplied for direct reading in any units such as ft. per min., in. per sec., or in any quantity which is proportional to the speed actuating the head. Various tachometer heads permit direct-measure-

There IS something YOU can do
ABOUT INFLATION!



Businessmen recognize ***inflation*** *as the nation's greatest single threat. But most of us have felt "What can one man—even one business—do to stop it?"*

But there is a way—if enough of us work at it. We can help more people . . . the men and women who work and vote and pay taxes . . . to understand the nature of inflation, its ***causes*** *and* ***cures****. Then we will have gone a long way toward eliminating this pending catastrophe.*

ONE TOOL YOU CAN USE: To help us give our own Bemis workers the inflation picture, we used the colorful, new 16-page booklet "How Stalin Hopes We Will Destroy America" produced by Pictorial Media, Inc. The more widely the booklet is used, the more good it will do . . . and it is available for distribution to your workers, too. It follows the time-proven "comic book" technique . . . dramatizes the dangers . . . and shows how all our citizens can help halt inflation before it's too late.

TESTS SHOW IT HELPS WORKERS: To get an impartial judgment of the value of "How Stalin Hopes We Will Destroy America," it was tested in Bemis plants by the Psychological Corporation under the direction of Dr. Henry C. Link, a foremost research authority. Dr. Link says "Those workers exposed to the booklet were found to have a significantly higher appreciation of the recommended ways to stop inflation than did the workers who did not see the booklet. Details of this test are available upon request." And Bemis factory workers make such statements as "Everything it says hit home, but you'd never figure it out for yourself until you read it". . . ."It's told in an interesting way so anyone can understand. My daughter, age ten, understood all of it". . ."In picture form it impresses you more. Most people don't read about it". . ."Had ideas that we wouldn't think about otherwise while we are working away—good book, agree with it—I guess I won't be the only one."

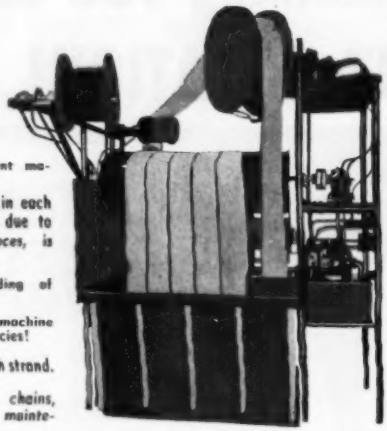
Because we believe this message is growing more urgent every day, Bemis is taking this means to commend to other businesses this weapon against inflation. It is the first of a series of such material that we expect to use.

BEMIS BRO. BAG CO.
St. Louis 2, Missouri

FOR EVERY BUSINESS, LARGE OR SMALL: In quantities, it costs only a few cents a copy—$10.00 for 100 copies, down to 3 cents per copy in larger quantities. Single copy free. For full information, write PICTORIAL MEDIA, INC., Attention: Paul Wheeler, 205 E. 42nd ST., NEW YORK 17, N.Y.

Compare the Advantages of

TEN-CO's TENSIONLESS CONTINUOUS DYE BECK!



- Easily attached to present machine at present location.
- Even yardage can be put in each line; variation of shade, due to different length of pieces, is eliminated.
- Self-loading and unloading of dye beck saves labor.
- "Knockoff Control" stops machine automatically in emergencies!
- Maximum yardage for each strand.
- Hydraulic drive! No chains, sprockets, gears. Low maintenance!
- Can be loaded and unloaded simultaneously!
- Can take all qualities of cloth which can be dyed on a conventional dye beck, without difficulty!
- More lots per day, due to high speed throughout.

Many other textile machinery products available . . . For complete information write:

TEN-CO MACHINE CO.

Main Office
131 Oliver St.
Paterson, N. J.

Export Division—5th Floor
6 MURRAY STREET
New York 7, N. Y., U.S.A.

Cut bunched and tangled thread waste...

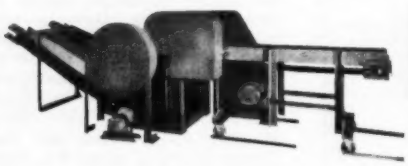
—to convenient condition for picking and blending with—

TAYLOR-STILES WASTE CUTTER

The cost of cutting is saved in the picking operations which follow.

•

Let us know how much tangled waste you process. We will give you description and price of the Taylor-Stiles waste cutter to meet your requirements economically.

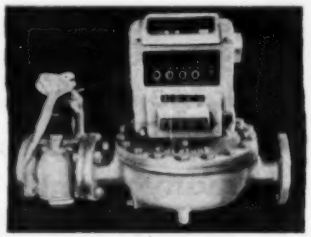


TAYLOR-STILES and Company
CUTTING MACHINES & KNIVES

15 Bridge Street
RIEGELSVILLE,
NEW JERSEY

ment ranges from speeds between ½ rpm. and 100,000 rpm. without requiring a speed-changing drive of any kind. The indicating meter is mounted in sponge rubber. With ordinary open wires, the indicator can be located up to 1,000 ft. from the head without affecting calibration. Selection of the wrong range or otherwise overspeeding does not damage the indicator.

Liquid Meter Shuts Off Automatically



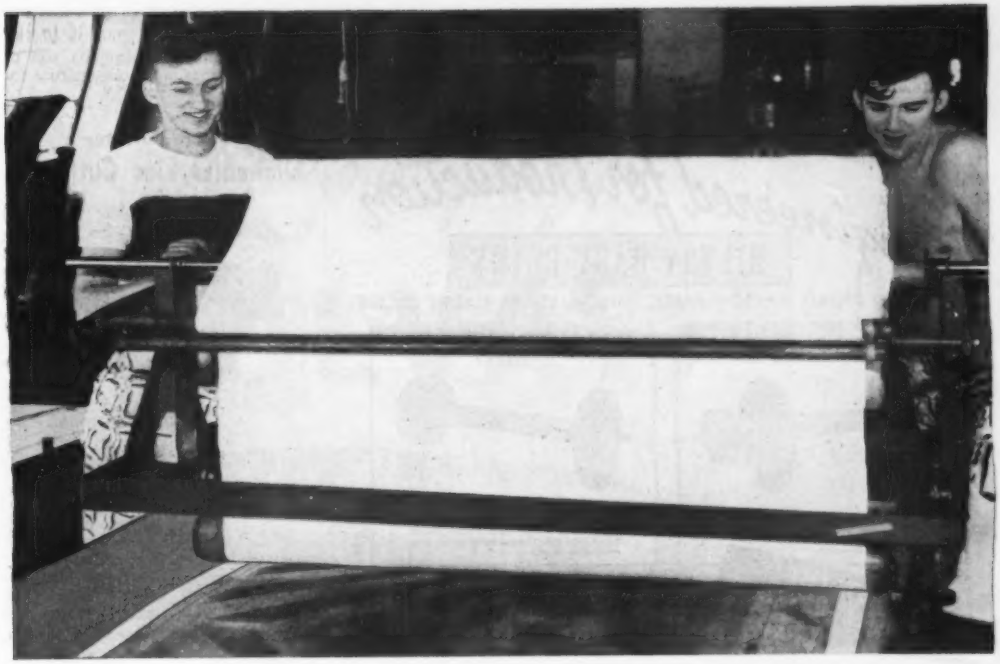
***LARGE NUMERALS** on the face of this meter provide a visual check when delivery is finished. A small totalizer keeps cumulative totals for daily, weekly, or monthly records.*

A new Auto-Stop liquid meter has been announced by Neptune Meter Co., 50 West 50th St., New York 20, N. Y. The Auto-Stop Meter consists of the new model 432 register mounted on the Neptune liquid meter, coupled with a quick-closing valve. This meter, inserted in the line near the washers or other processing tanks, automatically shuts off the flow after a predetermined quantity of liquid has been delivered.

Typical applications of the new meter are:

1. Accurate measurement of soap solutions to washers and fulling mills in woolen and worsted mills.
2. Accurate measurement of water to starch-cooking kettles.
3. Measurement of warm, hot, or cold water into all kinds of batching and processing operations.

In operation, the tripping mechanism is first set by pushing the buttons on the register until the number of gallons desired shows up on the numeral wheels just above the buttons. The register is then cleared back to zero by turning the reset handle, the valve is opened, and the operator is free to devote his attention to other jobs. The Auto-Stop tripping device automatically cuts off the flow when the exact quantity is delivered. Furnished in 1-, 1½- and 2-in. sizes, the

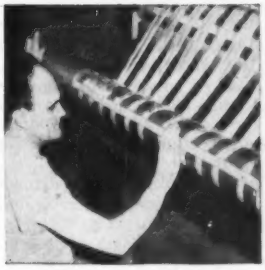


SILK SCREEN PRINTING COSTS CUT $40,000!

Yes, *tape* holds textiles in many silk screen printing plants! "SCOTCH" Brand Textile Tape No. 400 is double-coated, has adhesive on both sides. It securely fastens the selvage to the table in one speedy operation—at the same time the fabric comes off the lay carriage.

And this tape method is cleaner, too. No scalloped edges, no deposit, no holes on the fabric, no chance of damaging the screens. The pressure-sensitive adhesive stays tacky for 2500 yards of printing. One large manufacturer estimates a saving of 40% on annual pinning costs which approach $100,000!

There are many other "SCOTCH" Textile Tapes for many other jobs too—from warping to tabbing. Write today for your copy of "SCOTCH" *Textile Tapes in Action* and discover how these tapes can do a better job for *you*.



SECURING WARP THREADS for immediate full-speed beaming with "SCOTCH" Textile Tape No. 254. Only gentle hand pressure needed, and tape doesn't damage threads.

TABBING END LAPS safely with short strips of "SCOTCH" Textile Tape No. 916. No pin damage to cloth. High stretch factor of tape allows for contraction of material.

The term "SCOTCH" and the plaid design are registered trade marks for the more than 100 pressure-sensitive adhesive tapes made in U. S. A. by MINNESOTA MINING & MFG. CO., Saint Paul 6, Minnesota, also makers of "Scotch" Sound Recording Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives, "3M" Adhesives.

General Export: Minnesota Mining & Mfg. Co., International Division, 270 Park Avenue, New York 17, N. Y.
In Canada: Canadian Minnesota Mining & Mfg. Co., Ltd., London, Canada.

MILTON
A TIME TESTED LINE
Engineered for Production
MILTON WARP BEAMS
for BROAD, NARROW FABRIC, RIBBON, VELVET, CARPET LOOMS

BROADLOOM BEAMS

For C & K Looms (pictured) and Draper Looms (with let-off gear). Steel barrels, cast iron flanges.

RIBBON LOOM BEAMS

Steel barrels, with your choice of adjustable head and fixed shaft (pictured) or fixed head with removable shaft.

GET THE COMPLETE STORY

Write for Catalog 45 (Steel) or Catalog 45-A (Light Metal)

MILTON MACHINE WORKS, INC.
DESIGNERS • ENGINEERS • MANUFACTURERS
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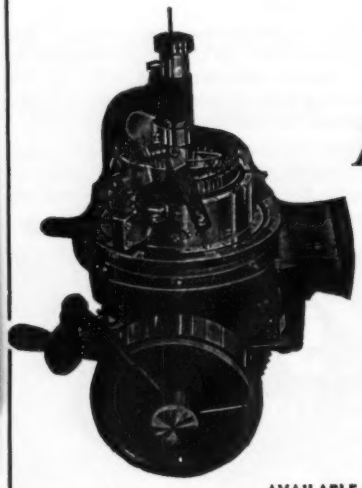

Argyle production
AT
MINIMUM COST

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SEMI AUTOMATICS ARE PRODUCING ARGYLES EFFICIENTLY IN MILLS THROUGHOUT THE WORLD

AVAILABLE IN
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Complete Range of Accessories—For Information Write

GEORGETOWN HARLEY-KAY-MARSLAND LTD. ONTARIO
ESTABLISHED 1906
CANADA

meter has capacities from 30 to 100 gal. per min., depending on size of meter and maximum temperature for which it is selected.

Power-Factor Meter Eliminates Line Cutting

TO OPERATE THIS POWER-FACTOR METER, the user merely clips the voltage leads to the potential source, clamps the hook around the conductor, and rotates the selector dial to obtain the proper reading. No complex connections or control settings are required.

A new, hook-on, power-factor meter, which permits direct measurement of power factor without cutting conductors or interrupting electrical service, has been announced by the General Electric Co. Meter and Instrument Div., Schenectady 5, N. Y.

Newest of the G-E hook-on testing instruments, the Type AK-3 power-factor meter may be used on any balanced 3-phase circuit. It gives direct power-factor readings in circuits with voltages ranging from 100 to 600 v. and currents from 15 to 600 amp.

The new instrument, a companion to the company's AK-1 hook-on voltammeter and AK-2 hook-on wattmeter, is designed for use in industrial plants where maintenance of high power-factor is an important economic consideration. Small, light, and portable, the meter can be used to locate easily those circuits where corrective action is needed.

The meter gives readings accurate to within 0.05 power factor. It has a frequency range of 50 to 90 cycles, and effective scale length of 13.5 in.

Rug Filler Cannot Be Untwisted

A new filler, called Cellulon, for rugs, carpets, elastic webs, and the like has been announced by Indus-

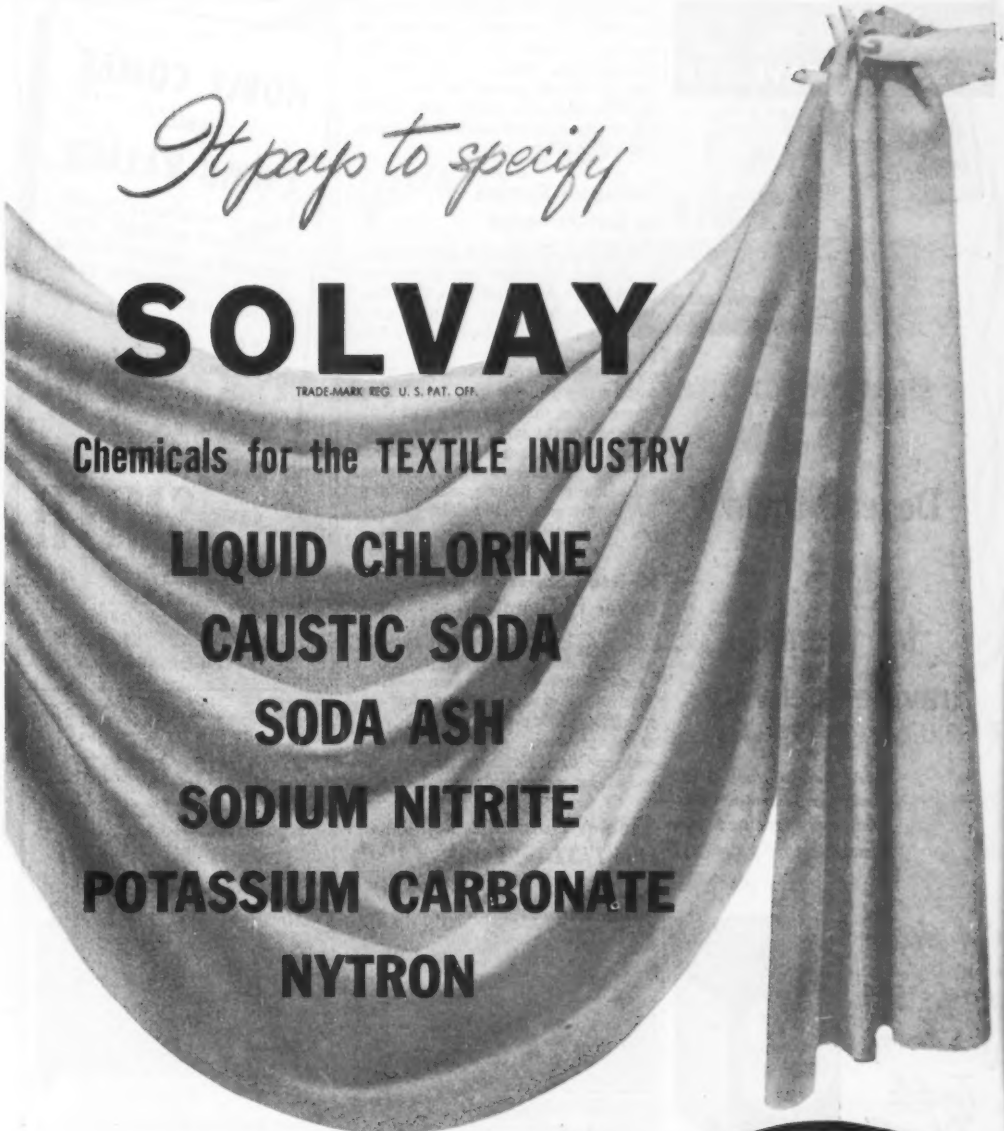
It pays to specify

SOLVAY

TRADE-MARK REG. U. S. PAT. OFF.

Chemicals for the TEXTILE INDUSTRY

LIQUID CHLORINE
CAUSTIC SODA
SODA ASH
SODIUM NITRITE
POTASSIUM CARBONATE
NYTRON



Soda Ash • Caustic Soda • Caustic Potash • Chlorine • Potassium Carbonate • Nytron
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W. P. Vaughn, W. H. Rose, Greenville, S. C. Box 1048—Phone 3-0915
O. B. Land, Athens, Ga. Box 1187—Phone 478
L. H. Meller, Jr., Mid Atlantic States 123 Treaty Rd., Drexel Hill, Pa. Phone Hilltop 6-1563
H. R. Fisher, Concord, N. C. Box 83—Phone 8366
H. J. Smith, Providence Box 1187—Gaspee 1-0100

tria, Inc., 52 Broadway, New York 4, N. Y. The product, a cellulose extrusion, is made in Germany. The distinguishing feature of the yarn is that its thread cannot be untwisted, as is the case with paper yarn. Cellulon comes in a natural brown, white, and other colors.

Intercom System Is Self-Powered

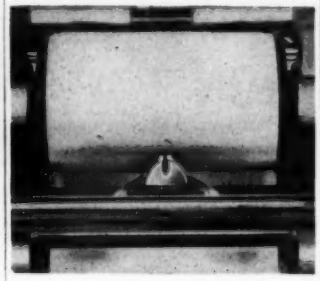
A line of self-powered inter-communication systems has been announced by Wheeler Insulated Wire Co., Inc., Waterbury 91, Conn. No external power source is required for the telephone system, and no batteries are used. The arrangement is said to be particularly suitable for installations where fire or shock hazards exist.

Range of the systems is over 20 mi. Either a ring or a flashing signal is available. Master-station instruments with selective ringing and common talking are also included in the new line.

Knitted Scavenger-Roll Cover Is Seamless

A new knitted cover for scavenger rolls has been announced by The Textile Laboratories, Gastonia, N. C. The roll cover is seamless and is said to catch 50% more lint than cloth or paper covers. A steel washer at each end of a re-covered roll prevents ends from wearing down.

Spooler Guide Has 1/32-In. Polished Slot



A NEW TRAVERSE THREAD GUIDE for the U. S. Acme high-speed spooler has been announced jointly by American Lava Corporation, Chattanooga 5, Tenn., and U. S. Textile Machine Co., Scranton, Pa.

The polished slot of this guide is 1/32 in. wide. It is said to assure accurate control at the end of the traverse, create a uniform wind, and result in a package of uniform weight. These guides are made of AlSiMag, a hard, long-wearing, homogeneous material. Free test samples are offered by the manufacturer.

NOBLE COMBS *and* **COMB BALLER**

Interchangeable repair parts and units for modernizing, standardizing brush motions, even pressure roll stands.

GEARS
Carefully manufactured gears in stock for combing, gilling and spinning.

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Manufacturers of Worsted Machinery
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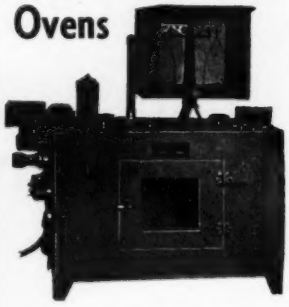

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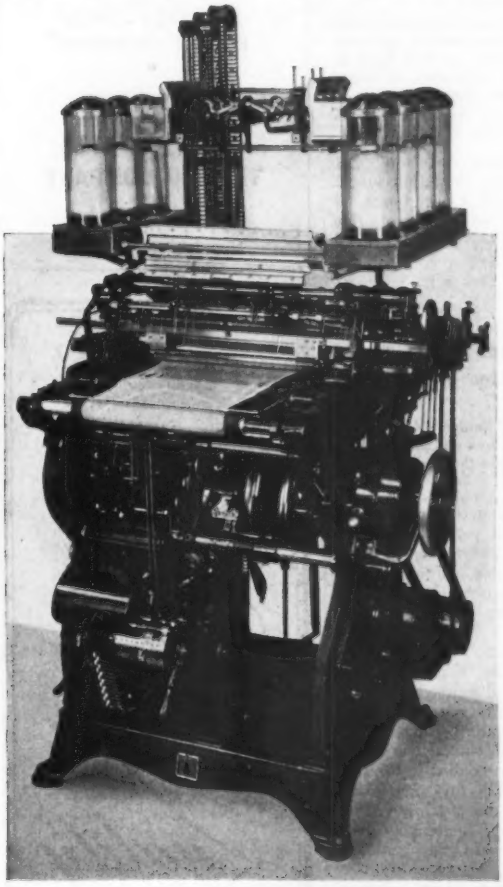

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Questions AND Answers

Using Longer Sweep Sticks On Box Looms

Technical Editor:

Our looms have two different lengths of shuttle boxes. If the pick-ball shoe and pick arm are the same on both types of looms, should the sweep stick be longer on the longer boxes? Both types of loom are weaving the same type of fabric and are of the same width. (9446)

Looms equipped with different length shuttle boxes should use longer sweep sticks on the longer boxes. If the difference is not too great, this condition may be corrected by using a longer lug strap with a slot that will be adjustable for each side.

Finished-Goods Pick Counts Determined by Wash Test

Technical Editor:

Is there a table of finished- vs. gray-goods pick counts? We check our shrinkage this way and have to make the calculation each time. (9443)

We do not know of any table of gray and finished pick counts. We doubt whether such a table would prove to be reliable, considering the many different processing conditions that we have from one plant to another.

If the inquirer is checking his shrinkage this way, the relation between the gray and finished count depends largely upon his preparation, dyeing, and finishing processes, both as to what they are and also as to the amount of tension applied in the various operations. On the same cloth, for example, whether a fabric is mercerized or not will materially affect the relation between the gray and finished count. Mercerizing itself varies from plant to plant and from machine to machine. This variation would naturally cause the pick count to vary too.

It is a more common practice to check shrinkage by making a wash test

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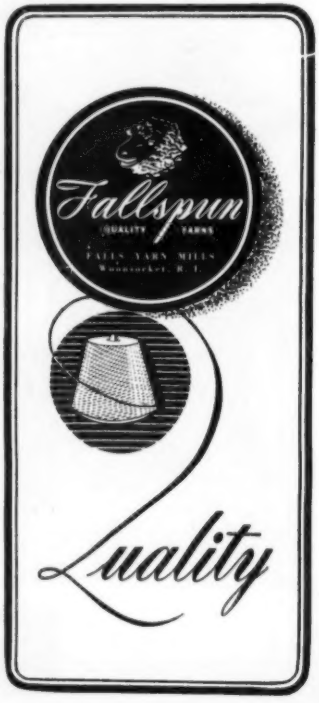

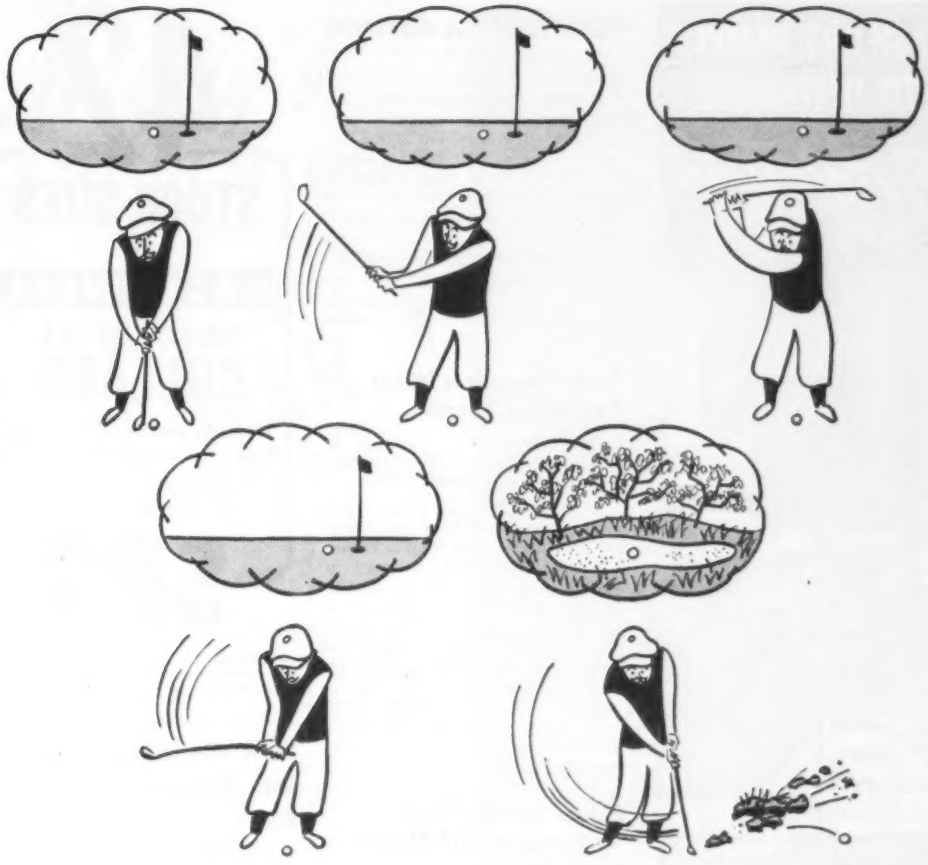

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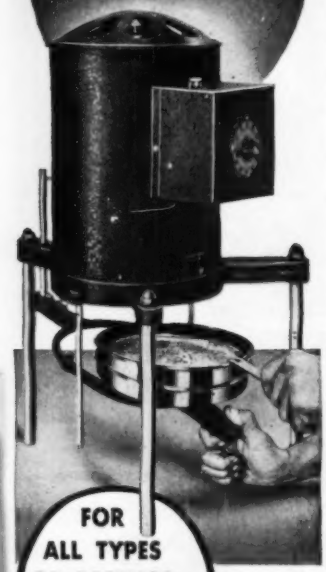

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Questions and Answers

(Continued)

on finished goods and actually finding the percent shrinkage that exists. For high-count fabrics, counting picks might be satisfactory, but with a low-count fabric, say 40 picks or less, a one-pick difference would mean an appreciable shrinkage error. We would question the reliability of such a method.

The standard wash-wheel test, such as is used for goods that bear Sanforized labels, is the generally accepted procedure for determining residual shrinkage.

Tester Measures Warp Tension on Looms

Technical Editor:

What methods are available for measuring warp tension on looms? (9445)

In the past few years, several instruments have been offered for measuring the tension of the warp in a loom. These testers may be used to measure the tension of the yarn in weaving, in warp preparation, or in any winding operations. In weaving it is necessary to make a number of warp-tension tests before being able to determine the proper tension of the warp for best weaving results. There are so many loom conditions that it is quite difficult to set a close standard for warp tension.

Relate Sample Data To Speed on Old Slasher

Technical Editor:

We have an old slasher without controls. We are getting extreme variations in our warps with consequent trouble in the weave room. Can you tell us how we can improve our warps without installing controls? (9442)

Installation of controls is the most effective method of getting at the sources of variations in warps. Some mills, however, have been able to improve their warps by following the general procedure outlined below.

For a certain warp made up of a given number of ends of a given yarn number:

1. Take a sample of a satisfactory warp.
2. Test the sample for moisture content.
3. Relate moisture left in warp to
   a. Slasher speed
   b. Warp construction

It should then be possible for you to determine in advance what the slasher speed should be for each of your constructions. This determination, of course, assumes that cylinder

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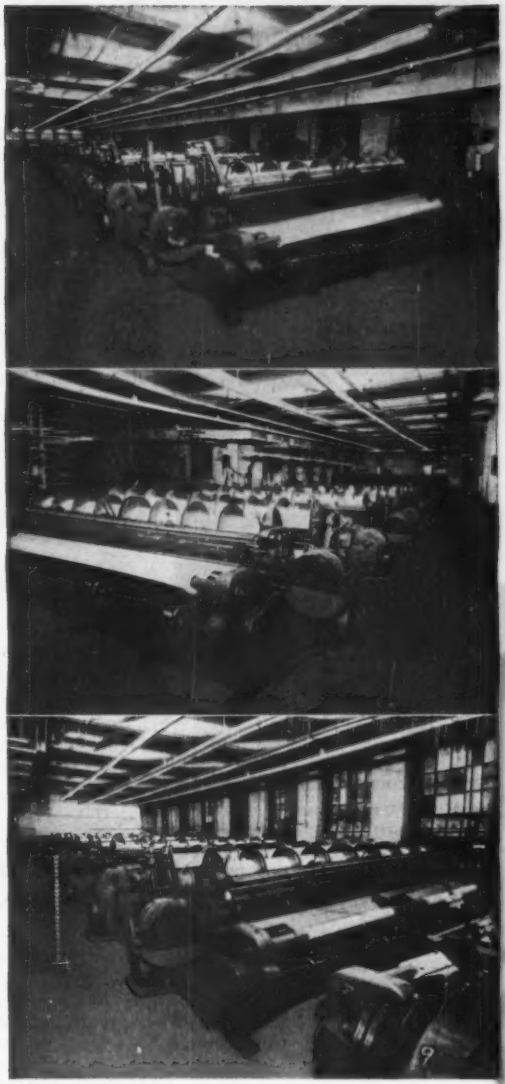

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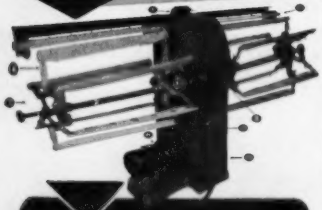

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Questions and Answers

(Continued)

temperature, room conditions, and size viscosity are constant.

Formula Gives Actual Production on Ring Frames

Technical Editor:

In calculating actual production from ring frames, how much deduction should be made from hank-clock readings for various counts? (9444)

Deductions for actual yardage delivered by the front roll are usually based on the twist multiplier used, regardless of the yarn number being spun. Twist contraction is proportional to this twist multiplier.

One basic formula for estimating twist contraction is:

Percentage contraction = (2.67 × TM) − 4.93

TM = Twist multiplier. 2.67 and 4.93 are constants.

To estimate yards wound on bobbin:

Indicated hanks × (1.00 − % contraction) multiplied by the yd. per hk. (840) will give actual yardage of twisted yarn.

Actual tests made on a Whitin spinning frame making 26s knitting yarn with a twist multiplier of 3.48 gave the following:

Indicated hanks 1.00
Indicated yardage 840
Actual yards reeled 801 (Average of 4 bobbins)
Contraction in yards 39
Percentage contraction 4.6

Piece Numbers Marked Instead of Sewed

Technical Editor:

We have a problem on our weaving and mending perches. After the pieces are taken off the weave-room perch, we sew the piece number into the heading at the end of the piece. We have a plan worked out whereby we can combine our markers' perches with our weave-room perch and save considerable handling. The only operation that does not fit into the program is the numbering.

Can you advise how this numbering can be done other than by the use of the sewing machine? We have tried various solutions for stenciling, but we have not found anything that will stand up to scouring and fulling. (9424)

A number of worsted mills are using a marking compound to eliminate sewing on piece numbers. The compound is usually in a tube with a ball-point head. If the marking is put on properly, it will stand dyeing and finishing on most types of fabrics. We do not know if it would stay on a

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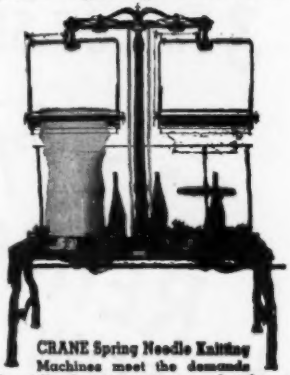

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Questions and Answers

soft piece of woolen or if it would stand long fulling.

It is important to make sure that the compound does not get on the body of the piece. It is impossible to remove all traces of it.

The companies that supply these markers would be glad to furnish more information at your request.

Fabric Woven Determines Choice of Picker Shoe

Technical Editor:

Why are the single-faced picker shoes replaced by the bat-wing type when converting a loom from hand operation to automatic? How is the proper shoe size determined? (9441)

It is not necessary to change from single-faced to bat-wing picker shoes when changing from hand-fed to automatic. The type of shoe is usually determined by the types of fabric woven, the length of the loom, the size of the shuttle, and picks per minute. A number of different types of picker shoes are made by the loom manufacturers to suit these conditions. The best procedure for you would be to send all this information to the loom manufacturer and request a recommendation for the proper shoe.

Book Reviews

Mobilization Problems Discussed in Detail

PRINCIPLES OF PLANT PROTECTION by Military and Civil Defense Commission for Pennsylvania, 201 South Office Building, Harrisburg, Pa.; paper, 65 pages, no charge.

It is the purpose of this manual to set forth for the managers of Pennsylvania industrial facilities and their employees some of the means by which acts of sabotage and civil disruption, timed to coincide with a possible surprise attack by direct weapons on our productive facilities, can be minimized or thwarted. Chapters include discussions on the aims and purposes of plant protection, various

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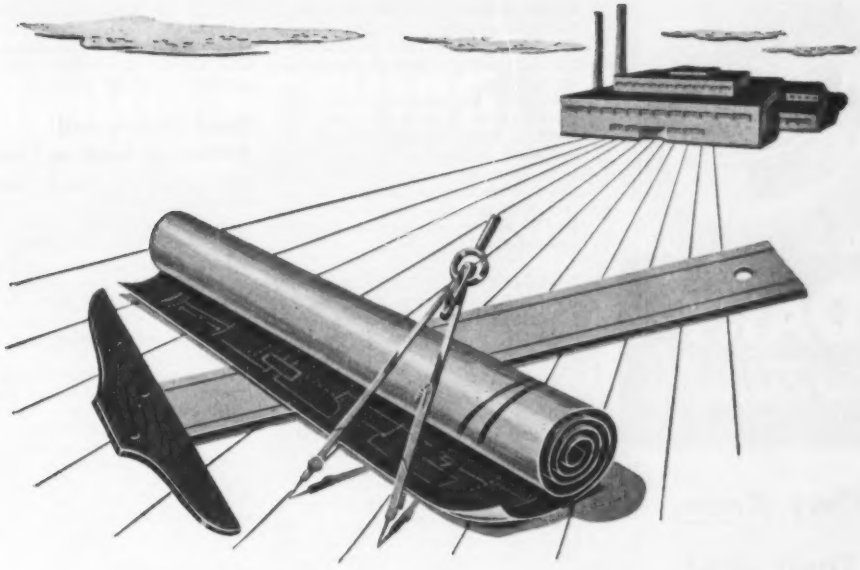

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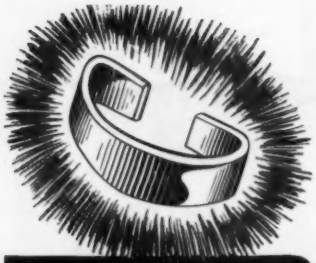

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hazards of industry, possible plant-protection measures, defense against direct attack, the administration of plant protection, and the making up of a good plant-protection survey report.

Much of the material is taken from publications on the subject prepared by the National Security Resources Board and the Munitions Board of the Dept. of Defense. Other States and many mills should follow Pennsylvania's example and get their plant-protection plans rolling. This booklet will serve the purpose of getting acquainted with the subject.

MOBILIZATION GUIDE FOR SMALL BUSINESS by Defense Production Administration, Dept. of Commerce, Washington 25, D. C.; paper, 31 pages, no charge.

This guidebook is designed to help small and medium-sized firms make a maximum contribution to defense needs and at the same time maintain a maximum output of consumer goods. Textiles are among the essential requirements of both government and civilians.

Through the use of the booklet, textile men can locate quickly the services the government provides for the obtaining of defense orders insofar as requirements exist and a mill's capabilities permit. Also included is a discussion on obtaining materials available to supply consumer requirements.

CRITICAL FACTORS IN MANAGEMENT PLANNING, Personnel Series No. 138, by American Management Association, 330 West 42nd St., New York 18, N. Y.; paper, 32 pages, $1.25.

MANPOWER RESOURCES FOR THE EMERGENCY, Personnel Series No. 139; by American Management Association, 330 West 42nd St., New York 18, N. Y.; paper, 44 pages, $1.25.

The papers included in these two pamphlets were presented at the Midwinter Personnel Conference of the American Management Assn. in Chicago, Ill., last February. The first of the above pamphlets includes a panel-session section on A-bomb protection in industry, while the second of the booklets contains a section on our national manpower-mobilization policy contributed by five business and government leaders.

ABC's OF CMP by National Production Authority, Dept. of Commerce, Washington 25, D. C.; paper, 15 pages, no charge.

This booklet is intended for readers who have a general interest in the Controlled Materials Plan that went into effect the first of this month, as well as for manufacturers and others directly affected by its operation. For the latter group, detailed information has already been made available in the form of mailed-out regulations, application forms, and instruction sheets.

The text of the ABC's booklet includes the following sections: (1) CMP and the Defense Program, (2) CMP defined, (3) CMP Fundamentals, (4) The Government's Role in CMP, (5) Industry's Role in CMP, (6) Product Classification, (7) Scope of the Program, (8) CMP in Operation, (9) Principal Regulations, (10) CMP Definitions, (11) NPA Industry Divisions, and (12) CMP Materials.

Short History and Reference Book on Lace

THE STORY OF LACE AND EMBROIDERY by David E. Schwab; Fairchild Publications, Inc., 7 East 12th St., New York 3, N. Y.; cloth, 96 pages, $3.25.

For the textile man who wants to get a little background in lace, including both its history and methods of present-day manufacture, this little book by the president of the Lace and Embroidery Assn. will be of great help.

To supplement the historical background, the book includes a factual glossary that defines some 50 types and classifications of lace and embroidery. Also included is a description of many modern laces, their names, distinctive characteristics, and uses. Forty illustrations of authentic designs, types, and methods of hand and machine manufacture are generously scattered throughout the text.

100 Years of Indian Cotton Textiles

INDIAN COTTON TEXTILE INDUSTRY, Centenary Volume, 1851-1951, edited by M. P. Gandhi; Messrs. Gandhi & Co., Jan Mansions, Sir Pherozshah Mehta Road, Fort, Bombay 1, India; heavy-paper cover, 202 pages, $4.50.

This 13x10-in. volume has been produced in English in honor of the first hundred years of Indian cotton-textile manufacturing as a factory industry. Authoritative contributions on various phases of cotton manufacturing have been made in feature stories, well documented with tables, charts, and maps, by Indian industry leaders. A detailed directory of cotton mills in both India and Pakistan, as well as of mills in the process of being erected, is included in the appendix.

This is the most comprehensive book on Indian textiles that has yet appeared in English. As such it will be of value to those dealing with the Indian textile market in any way.

Weekly News Sheet On NPA Activities

DEFENSE PRODUCTION RECORD by the Office of Public Information, National Production Authority, Dept. of Commerce, Washington 25, D. C.; weekly news sheet, 16 pages, $2.50 per annum.

This little news sheet has been set up to provide a ready reference to the official actions of defense-production agencies that we read about from day to day in our regular newspapers. **The Record** is in convenient form so that mill men responsible for keeping up with defense-production actions can find quickly in one place all the information they need. Single copies are available at 5¢ each.

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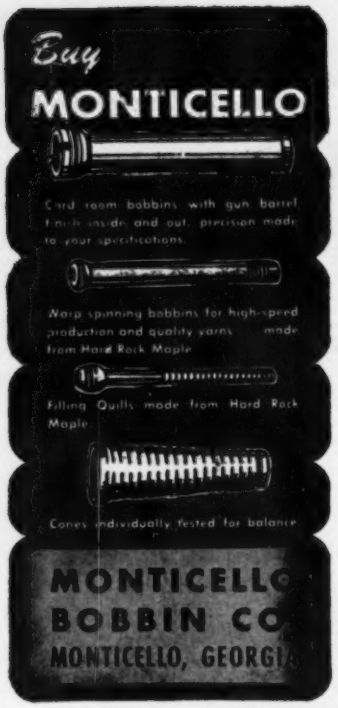
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News of the month

Hot Oil-Bath Dyeing. The continuous hot-oil method of dyeing may prove to be just the thing for the commercial dyeing of some of the newer synthetic fibers, according to Sumner H. Williams, Southern manager of General Dyestuff Corp. On the other hand, some synthetic fibers seem to retain a higher percentage of oil than cotton after emulsification of the oil by passage of the cloth through a cold bath containing a detergent. Additional experimental work is being carried out on synthetics, as well as on woolen and worsted blends with synthetic fibers. To date, approximately 20,000,000 yd. of cotton and rayon cloth have been processed by the hot-oil method. Advantages range from excellent shading and luster to high-speed and economical operation and adaptability to short runs.

Loom of the Future. Standardization of the various types of looms now in existence should be sought in the future, Ernest Cotterill, Courtaulds Ltd., told the annual conference of the Textile Institute in Brighton, England, a few weeks ago. The various mechanisms needed to extend the range and patterning scopes of the loom should be designed to fit on a standard, well conceived basic plain loom made in a range of widths and weights, he said. Other features of future looms should be simplicity of operation, silence, safety features, less rubbing action on both warp and filling yarns, and reasonableness of cost.

Additional Nylon Capacity. A license agreement under which Chemstrand Corp., jointly owned by American Viscose Corp., Philadelphia, Pa., and Monsanto Chemical Co., St. Louis, Mo., will produce both continuous-filament and staple nylon was recently signed by Osborne Besanson, president of Chemstrand, and Crawford Greenewalt, president of E. I. du Pont de Nemours & Co., Inc.,

TEXTILE CALENDAR

Principles of Textile Research, summer course, Mass. Institute of Technology, Cambridge, Mass., July 2 to 27, 1951.

Southern Industrial Relations Conference, Blue Ridge, N. C., July 18 to 21, 1951.

Summer Refresher Course, Teachers College of Columbia Univ. and U. S. Testing Co., Hoboken, N. J., July 23 to Aug. 10, 1951.

American Society for Quality Control, textile quality-cotrol conference, Clemson, S. C., Aug. 23 and 24, 1951.

American Chemical Society, diamond jubilee, New York, Sept. 3 to 7, 1951.

AATCC, Southeastern Sect., Columbus, Ga., Sept. 8, 1951.

National Instrument Conference, Sam Houston Coliseum, Houston, Texas, Sept. 10 to 14, 1951.

AATT, meeting, Builders Club, New York, Sept. 12, 1951.

Fiber Society, fall meeting, Swampscott, Mass., Sept. 13 and 14, 1951.

National Assn. of Cotton Mfrs., 97th annual meeting, New Ocean House, Swampscott, Mass., Sept. 13 and 14, 1951.

AATCC, Phila. Sect., Kugler's Restaurant, Philadelphia, Pa., Sept. 14, 1951.

AATCC, Hudson-Mohawk Sect., Jack's Restaurant, Albany, N. Y., Sept. 21, 1951.

AATCC, Piedmont Sect., annual meeting, Charlotte, N. C., Sept. 22, 1951.

AATCC, Mid-West Sect., Morrison Hotel, Chicago, Ill., Sept. 29, 1951.

AATT, meeting, Builders Club, New York, Oct. 3, 1951.

Carded Yarn Assn., annual meeting, Carolina Hotel, Pinehurst, N. C., Oct. 4, 1951.

17th Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 6 to 11, 1952.

AATCC, national convention and Textile Exposition, Statler Hotel, New York, Oct. 17 to 19, 1951.

North Carolina Cotton Mfrs. Assn., annual meeting, Carolina Hotel, Pinehurst, N. C., Oct. 18 and 19, 1951.

Packaging Institute, annual forum, Hotel Commodore, New York, Oct. 22 to 24, 1951.

AATCC, Hudson-Mohawk Sect., Hotel Utica, Utica, N. Y., Oct. 26, 1951.

AATCC, Northern N. E. Sect., Lowell Textile Institute, Lowell, Mass., Oct. 26, 1951.

AATCC, Phila. Sect., Kugler's Restaurant, Philadelphia, Pa., Oct. 26, 1951.

AATCC, R. I. Sect., Providence Engineering Society, Providence, R. I., Oct. 26, 1951.

AATT, meeting, Builders Club, New York, Nov. 7, 1951.

Textile Research Institute, annual meeting, Waldorf-Astoria Hotel, New York, Nov. 8 and 9, 1951.

AATCC, R. I. Sect., Johnson's Restaurant, Providence, R. I., Nov. 16, 1951.

AATCC, Northern N. E. Sect., annual meeting, Boston, Mass., Nov. 30, 1951.

AATT, meeting, Builders Club, New York, Dec. 5, 1951.

AATCC, Hudson-Mohawk Sect., Jack's Restaurant, Albany, N. Y., Dec. 7, 1951.

AATCC, Phila. Sect., Kugler's Restaurant, Philadelphia, Pa., Dec. 7, 1951.

AATCC, Southeastern Sect., La Grange, Ga., Dec. 8, 1951.

1952

Plant Maintenance Show, Convention Hall, Philadelphia, Pa., Jan. 16 to 19, 1951.

Fiber Society, spring meeting, Clemson House, Clemson, S. C., April 16 and 17, 1952.

Knitting & Allied Crafts Exposition, sponsored by Natl. Knitted Outerwear Assn. and Underwear Institute, Grand Central Palace, New York, April 21 to 25, 1952.

American Cotton Mfrs. Institute, annual convention, Haddon Hall, Atlantic City, N. J., May 15 to 17, 1952.

ASTM, annual meeting, New York, June 23 to 27, 1952.

AATCC, national convention, Boston, Mass., Nov. 6 to 8, 1952.

1954

American Textile Machinery Exhibition, sponsored by National Association of Textile Machinery Manufacturers, Atlantic City Auditorium, Atlantic City, N. J., April 26 to May 1, 1954.

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NEWS OF THE MONTH (Continued)

Wilmington, Del. Chemstrand will produce 50,000,000 lb. of nylon annually for the use of all branches of the textile industry, thus increasing by about 50% the present total annual U. S. production.

Worldwide Wool Situation. Estimated stocks of wool in consuming countries are about three to three-and-a-half months' consumption, with another two months' afloat or awaiting shipment, said F. S. Arthur, general manager of the UK-Dominion Wool Disposals Organization at the recently ended International Wool Conference in Barcelona, Spain. This inventory represents a relatively low level compared with pre-war. Financing of wool purchases at that time was much easier, however. Given moderation in the requirements of governments for rearmament needs and a planned spreading of military contracts, it does not seem unreasonable to expect that worldwide wool demand and supply will come into approximate balance during the approaching season, he said. Next season's total supplies should be about 2,300,000,000 lb. on a clean basis. Excluding stockpiling, Mr. Arthur estimates that about 12% of this total supply will go into world military fabrics.

Philatelic Textile Display. "The Story of Textiles" as told by postage stamps is now on display as a topical exhibit in the National Philatelic Museum, Philadelphia, Pa. The extremely large stamp exhibit deals not only with various types of fibers, weaving, and dyeing; but it also goes back to early days of civilization and shows how textiles played their role. Bernard Davis, founder of La France Industries and now president of Northwood Textile Mills, is both director of the museum and sponsor of the textile postage-stamp exhibit.

Indian Rayon-Yarn Producers. Three new plants are racing to be the first to produce rayon yarn on a large scale in India. First in the field is Travancore Rayons, operating in India's most southerly State. This enterprise was floated more than five years ago, but it has taken that long to obtain a building site and the steel and cement to build with. The Travancore plant can produce at the moment 1,785 tons of yarn a year, about 7% of the country's needs.

Preliminary reports about National Rayons, 30 miles north of Bombay, indicate that its product will compare favorably with imported rayons.

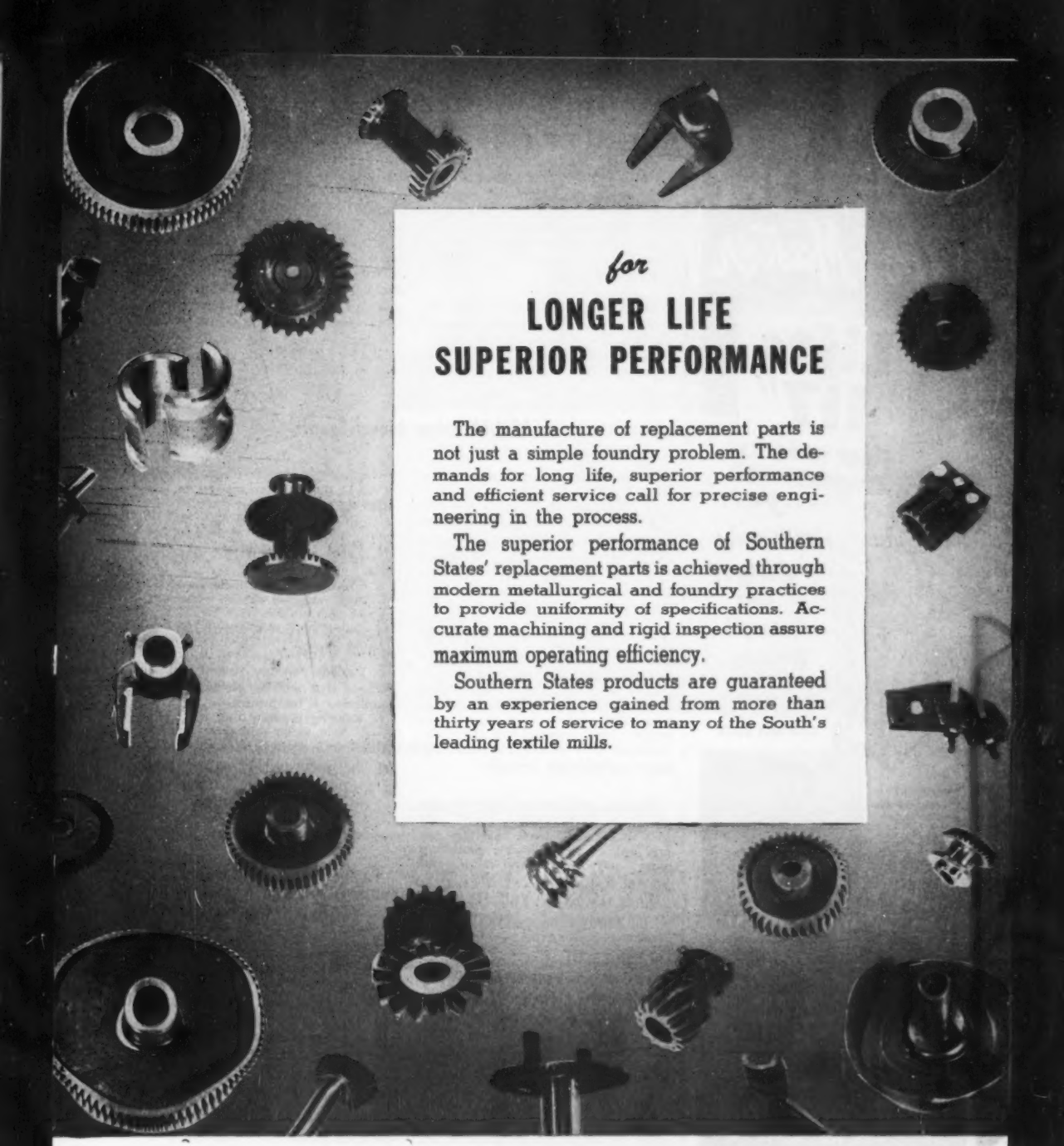
PROF. EDWARD R. SCHWARZ, head of Textile Div., Massachusetts Institute of Technology, Cambridge, Mass., will receive the Harold DeWitt Smith Memorial Medal in New York at the coming October meeting of Committee D-13 on Textile Materials of the ASTM. The medal is awarded at intervals of not less than a year for outstanding achievement in the field of textile-fiber science and utilization, including the development and promotion of knowledge of textile fibers and structures and/or methods for the evaluation of their properties.

The company expects to produce yarn at a cost of a little over a dollar a pound. Both Travancore and National potspin viscose yarns. National has 30 machines installed. The company makes its own sulphuric acid and carbon bisulphide on the spot and plans to make caustic soda later. Anticipated production is 2,500 tons per annum, about 10% of the total requirements of the nation.

The third producer, Sirsilk Ltd. of Hyderabad, is not so far along.

Total production of the three

HENRY W. SWIFT (left), executive vice president of Swift Spinning Co., Columbus, Ga., was recently elected president of the Cotton Manufacturers Assn. of Georgia. He was congratulated at his election at Daytona Beach, Fla., by L. G. Hardman, Jr. (right), president of Harmony Grove Mills, Commerce, Ga., and the retiring association president.



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NEWS OF THE MONTH — Continued

plants is not likely soon to exceed 15 tons per day. Indian textile mills, with about 25,000 looms running on rayon, consume 70 tons of rayon yarn a day. The balance will still be imported, mostly from Italy, England, France, and Japan.

James Hargraves Memorial. A committee composed of representatives of the British textile industry, scientific, and historical societies has been set up recently to raise a memorial fund for the purpose of (1) affixing a plaque to the house where James Hargraves, inventor of the spinning "jenny" in 1764, lived in Stanhill, Oswaldthistle, Lancashire, at that time, (2) constructing a small memorial garden adjacent to the house that will be known as the James Hargraves Memorial Garden, and (3) establishing a memorial scholarship for textile students. Contributions to the cause are being received by Mr. J. Lomax at the Town Hall in Oswaldthistle.

Mobilization News Items

Defense Information Center. A Defense Production Inquiry Center that is a joint venture by NPA and the Defense Production Administration has been opened in the main lobby of the old GAO Building, Fifth and G Sts., Washington N.W., D. C. The new center is set up to act as a clearing house for information on defense production, organized specifically for business representatives in the Washington area. Stationed near the reception desk is a staff of industry specialists who can supply information on specialized problems, such as textiles. The new center is expected to handle 3,000 personal and telephone inquiries daily as the tempo of defense mobilization increases.

Obtaining Contract Bids. Mills, dyehouses, and finishing plants anxious to obtain defense contracts can find out by the following procedure what types of yarns and fabrics and finishes the government is going to want in the future. Mills should list all the constructions and finishes they are in a position to handle. Lists should be made out on company-letterhead paper and sent to Specifications Control Section, Philadelphia Quartermaster Depot, 2,800 South 20th St., Philadelphia 45, Pa. From the listings, invitations to bid will be sent to those organizations that indicate they can handle the particular fabric or finish needed.

Five-Year-Amortization Survey. To gauge the progress of industrial expansion under the accelerated tax-amortization program now under way, the Defense Production Administration is conducting a survey of companies that have received certificates of necessity as provided for under an amendment to the Revenue Act of 1950. DPA has written holders of certificates of necessity, requesting completion of the quarterly report forms (Form DPAF-1) that call for answers to the following questions:

1. Exact location of the new facility.
2. Construction contracts awarded.
3. Any revisions of the estimated costs of each project.
4. Value in place at the end of the calendar quarter.
5. Added capacity for specified products that will be available upon completion of the project.
6. Existing capacity that has been or will have to be shut down or dismantled as a result of disruption during the individual expansion program.
7. Existing capacity for each specified product that will remain in operation during the expansion.

The above information is needed to provide a guide to progress of the over-all industrial-expansion program. By the end of May, 23 textile firms had obtained approval for expansions amounting to $25,500,000, or 50.7% of the total amount the 23 mills had requested.

Rayon Tire-Yarn Amendment. In an amendment to Order M-13, NPA has ruled that a high-tenacity rayon-yarn producer is now required to accept defense-rated (DO) orders for not more than 30% of his monthly scheduled production. The ceiling on DO orders previously was 15%. The amendment does not apply to textile yarn, like that used in the manufacture of rayon hosiery and wearing apparel. The amendment was made to distribute increasing defense demands for high-tenacity rayon yarn equitably among producers so as to prevent disruption of production schedules.

AT THE Cadillac Textile Mills, Inc., Cumberland, R. I., the construction used is typical of the *PC Vision-Lighting Plan. Here ventilating units and inserts of PC Vue Glass Blocks are utilized. The clear Vue blocks provide good general vision without sacrificing insulation value. Architect: Roy F. Arnold, Pawtucket, R. I.

* The PC Vision-Lighting Plan consists of orientation-keyed areas of PC Functional Glass Blocks, selected for sun or non-sun exposure, used with vision-ventilation areas as required.

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NEWS ABOUT *Suppliers*

Equipment Suppliers

Century Electric Co., St. Louis, Mo., has appointed R. N. Hill vice president in charge of operations. Mr. Hill has been associated with the company since 1920.

Draper Corp., Hopedale, Mass., has elected two new vice presidents. William K. Child, now vice president and general sales manager, is at the end of summer transferring his headquarters from Spartanburg, S. C., to Hopedale. Walter M. Mitchell, now vice president in charge of Southern sales, will move from Atlanta, Ga., to Spartanburg. In September, Erwin N. Darrin will relinquish his sales-department activities and devote his time to other executive duties.

Edda International Corp., New York, has opened a new Southern sales and technical-service office in Greenville, S. C. Both the New York and Greenville offices are under the supervision of B. Gudjonsson and H. A. Nagel.

H & B American Machine Co., Pawtucket, R. I., has appointed William B. Martin manager of the Charlotte, N. C., office. He was formerly associated with the engineering firm of Francisco & Jacobus as its Southern sales manager.

James Hunter Machine Co., North Adams, Mass., has opened a new repair station in Greenville, S. C. The facilities will be devoted to service for the Leyland-Mycock machinery division of the company. Ralph C. Wing is the director of the repair station.

G. Josephy's Erben, Linz, Austria, celebrated on June 30 its 100th anniversary as a textile-machinery manufacturer. A six-weeks' exhibition of present-day machinery is marking the anniversary at Linz.

Link-Belt Co., Chicago, Ill., has started the construction of a modern engineering and manufacturing plant at Colmar, Pa., to supplement existing facilities at Nicetown, Pa. Robert W. Suman has been named chief engineer of the Philadelphia, Pa., plant, succeeding William S. Campbell, retired.

DR. R. E. GREENFIELD, general superintendent of A. E. Staley Mfg. Co., Decatur, Ill., since 1946, was recently elected vice president in charge of manufacturing. He has been with the firm since 1926.

Macbeth Corp., Newburgh, N. Y., has acquired a second plant in Newburgh for the manufacture of electronic and optical instruments. The overall plant size has been quadrupled since the company moved from New York City early last year.

Marquette Metal Products Co., Cleveland, Ohio, has increased the territory of C. H. White, North Carolina representative. He will now handle the sale of company products in South Carolina also. He is moving to Charlotte, N. C.

Meese, Inc., Madison, Ind., has appointed H. T. Day to handle the company line of canvas baskets in the Middle Atlantic area.

Osborn Mfg. Co., Cleveland, Ohio, recently appointed A. J. Steffens, Jr., a sales engineer of the firm. He will cover the Carolinas, eastern Georgia, and Florida out of Charlotte, N. C.

Owen-Illinois Glass Co., Toledo, Ohio, has assigned Frank

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Cotton Rinsers
Cotton Stock Dryers
Crush Roll Machines
Dusting Machines
Mixing Pickers
Opening Machines
Package Dryers
Press Roll Machines
Rayon Staple Pickers
Skein Dryers
Slat Conveyors
Special Dryers
Stainless Steel Bleach Bowls
Top Press Machines
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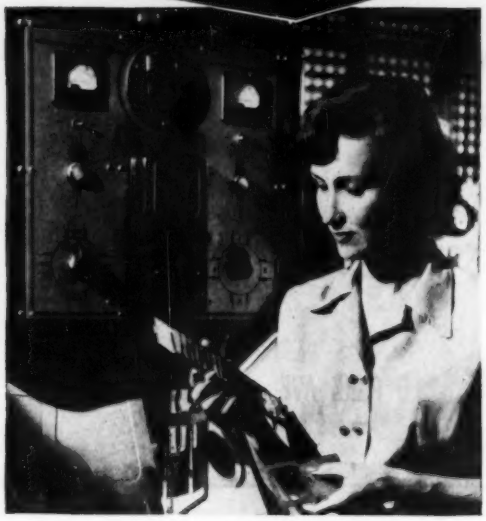

Women who use the Good Housekeeping Guaranty Seal as a guide in purchasing fabrics know that it is the distinctive mark of dependable quality. Before granting the Seal, the Good Housekeeping Textile Laboratory uses an Atlas Fade-Ometer to measure fading of colors caused by sunlight on each fabric.

In the Fade-Ometer, dyed fabrics — plastics — and a host of other products — are carefully evaluated for their resistance to the fading action of sunlight. As the source of light, the Fade-Ometer utilizes the Enclosed Violet Carbon Arc, recognized as an excellent reproduction of natural sunlight. Samples are rotated around this source, and light is highly concentrated so that the effects of sunlight are accelerated many times.

Relatively short exposure in the Fade-Ometer, therefore, is equal to months of outdoor sunlight and on the basis of test results the Textile Laboratory can safely predict whether or not the fabric will be satisfactory in actual use.

Operation of the Fade-Ometer is simple and fully automatic so that it may safely be left in continuous operation overnight. The degree of fading on each sample is measured in terms of Standard Fading Hours.

ATLAS ELECTRIC DEVICES COMPANY

361 West Superior St., Chicago 10, Illinois

LAUNDER-OMETERS — WEATHER-OMETERS — FADE-OMETERS

NEWS ABOUT SUPPLIERS (Continued)

J. M. MOON, director of sales of Signode Steel Strapping Co., Chicago, Ill., has been elected vice president of the company. He has been associated with Signode since 1934 in both field-engineering and sales capacities.

JOHN WYATT has joined Watson & Desmond, Charlotte, N. C., as manager of the Greensboro, N. C., office. For the last three years, he had been assistant purchasing agent of Burlington Mills Corp.

A. Davenport as Kaylo sales engineer in Atlanta, Ga. His territory includes the Carolinas, eastern Tennessee, Georgia, Alabama, and Florida.

Standard Pressed Steel Co., Jenkintown, Pa., has made two recent promotions. C. W. Hollingsworth, former manager of Unbrako Socket Div., is now divisional sales manager of the three company divisions. Raymond N. Gruber, with the company since 1937, succeeds Mr. Hollingsworth in his former position.

Sterling Electric Motors, Inc., Los Angeles, Calif., has made several additions to its sales and engineering staff. John F. Ingle is now serving central and northern California and western Nevada as district manager at San Francisco. In Houston, Tex., Robert P. Killion is district manager for southeastern Texas. In Baltimore, Md., H. L. Fritz is serving the Maryland territory. In Birmingham, Ala., the territory is being served by Edmond W. Hodge, Jr. In New York, Joseph P. Foley, Charles E. O'Leary, and Raymond S. Portner have been added to the staff.

Universal Winding Co., Providence, R. I., has placed Paul P. Johnson in charge of all manufacturing. He had been assistant to the president since the end of last January.

Victor Ring Traveler Co., Providence, R. I., has named Edwin R. Jerome vice president and general manager. As general manager, he succeeds John E. Hull, president of the company.

Emil V. Wilson Co., Inc., Greenville, S. C., has opened its new loom-assembly plant. A total of 60 looms a week can be reworked, modernized, assembled, and shipped.

Charles L. Yeomans, formerly with Draper Corp., is now in business for himself in Spartanburg, S. C. He is specializing in loom rebuilding, widening, and general overhauling.

Chemical and Yarn Suppliers

Celanese Corp. of America, New York, has named Carl R. Dolmetsch general manager of the viscose division. He joined the company in 1946 following the company merger with Tubize Rayon Corp.

E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., recently appointed Herman K. Moeller manager of the fabric-development section of the rayon division, succeeding E. A. McAbee, resigned. Manfred Keller of the rayon department has been named manager of a newly established service section of the planning division. Walter C. Eberlin is now manager of the engineering section of the planning division. Allan A. Wiggins, Jr., has also joined that division. Dr. Frederick R.

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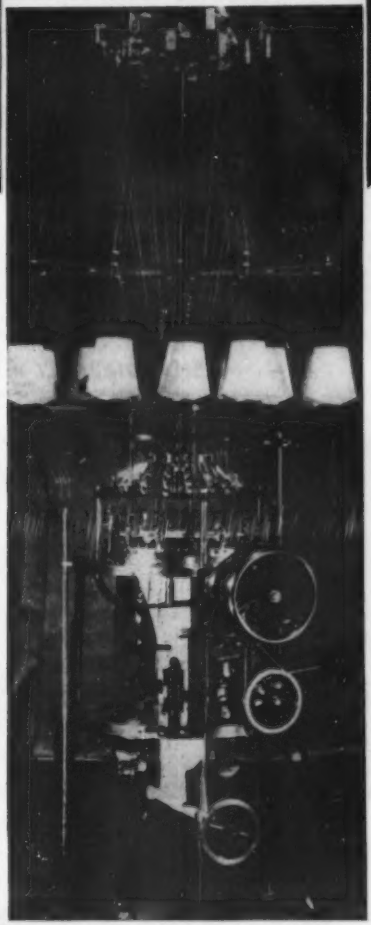
STANDARD EQUIPMENT

STAFFORD & HOLT, INC.



KNOWN BY THE COMPANY THEY KEEP

Manufacturers and knitters alike prefer Wesco Stop Motions for best results. Experience has proven Wesco gets the best out of the machine and assures greater production, less down time, fewer broken needles and less wasted yarn. Built in any series from 1 to 96 ends.

LOOK FOR WESCO

on all these knitting machines:

H. Brinton Co.
Charles Cooper Co.
Crane Manufacturing Co.
Edmon Products Corp.
Fidelity Mach. Co., Inc.
Jacquard Knitting Mach. Co.
Lamb Knitting Mach. Co.
Leighton Machine Co.
Ordnance Gauge Co.
Scott & Williams, Inc.
Stafford & Holt, Inc.
Supreme Knitting Mach. Co.
Wildman Mfg.Co.

STANDARD THE WORLD OVER

STOP-MOTION DEVICES CORP.

1471-77 Fulton St. Brooklyn 16, N. Y.

Another of a Series of Knitting Machine Builders. Others to follow.

CONSERVE YOUR QUILLS!

Use the

NASH "79" QUILL POLISHER

to relacquer worn quills

You need not discard your old loom bobbins because they are worn or have slight surface imperfections. They can be sanded smooth, and re-coated with finishing material.

If your quills are in good condition, the conventional way of using the Nash No. 79 with steel wool pads, special polish and burnishing pads will produce a perfect surface finish, preventing filament breakage or transfer of dirt to the yarn.

Failure of the finish coat calls for a complete refinishing operation on the body of the quill, and the Nash relacquering attachment was developed to meet this need.

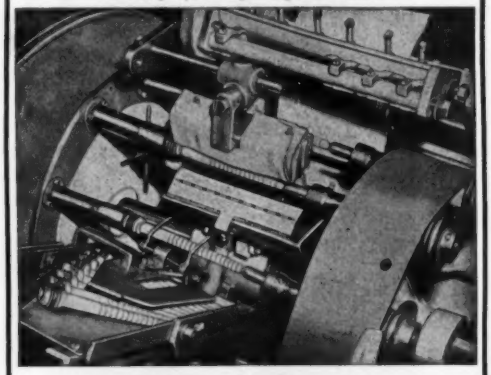
Lacquers 30 to 35 Quills Per Minute

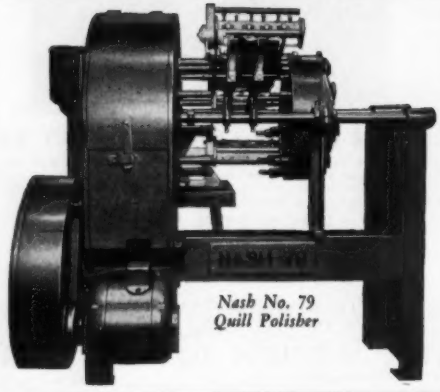
With the relacquering attachment just developed for use with the Nash No. 79 Quill Polisher, you can apply a new coat of Lacquer or else a shellac and oil finish—automatically at 30 to 35 bobbins per minute. The attachment is easily attached or removed.

Write for descriptive material on the Nash No. 79 Automatic Quill Polisher and Relacquering attachment.

J. M. NASH COMPANY
2364 N. 30th Street Milwaukee 10, Wisconsin

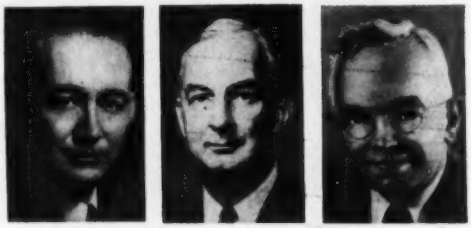
Close-up of Relacquering Attachment





Nash No. 79 Quill Polisher

NEWS ABOUT SUPPLIERS (Continued)



DR. ERNEST W. REID (left) has been elected president of Corn Products Refining Co., New York. He was formerly vice president in charge of the chemical and research division. MORRIS SAYRE (center), president of the firm since 1945, is now vice chairman of the board. Mr. Sayre was president of the NAM in 1948. HOWARD G. WASCHER (right), retiring as executive vice president of Corn Products, has been elected chairman of the executive committee.

Millhiser has been named director of Orlon acrylic-fiber research at Benger Laboratory, Waynesboro, Va.

Emery Industries, Inc., Cincinnati, Ohio, has promoted Vernon W. Colby to assistant chemical sales manager. He had been servicing the territory composed of Connecticut, Rhode Island, and eastern New York State.

Geigy Co., Inc., New York, has opened new and improved facilities in Philadelphia, Pa. A modern laboratory and increased warehousing and shipping areas are included.

Libbey-Owens-Ford Glass Co., Toledo, Ohio, recently named Claude F. Harr manager of the sales technical-service department of the new fiber-glass division.

Monsanto Chemical Co., St. Louis, Mo., has elected Dr. Charles A. Thomas its president. He succeeds William M. Rand, who has retired under the company pension plan. The new president had been executive vice president since 1947.

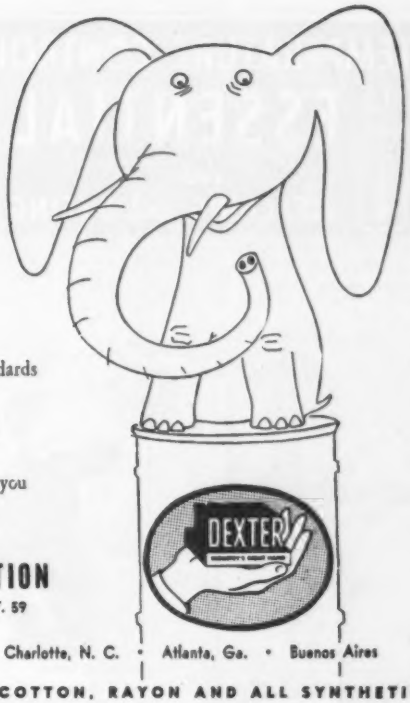
Morningstar, Nicol, Inc., New York, recently celebrated its 100th anniversary as a company. The firm has put into effect a profit-sharing plan for the benefit of all employees with two or more years of continuous service.

Stein, Hall & Co., Inc., New York and Atlanta, Ga., has appointed J. S. LaCascia of New Orleans, La., its representative in Louisiana and Arkansas. He will work out of the Atlanta office.

W. C. MILLER, treasurer of Industrial Rayon Corp., Cleveland, Ohio, since 1945, has been elected controller and treasurer of the company. He has been with the firm since 1939. As controller, he succeeds E. V. Batteurs, resigned.

GEORGE R. ZUST, former assistant sales manager for the textile-specialties division of Nopco Chemical Co., Harrison, N. J., was recently named field sales representative of the firm in the New York-Pennsylvania sales territory.

taming textiles
CHEMICALLY



is strictly a job for Specialists.

You are the *specialist* whose own skills and standards contribute to a finely processed fabric.

We are the *specialists* whose chemical specialties can complement your work.

If you are on the alert for improvement, or, if you have an unanswered problem, let us assist you.

DEXTER CHEMICAL CORPORATION
TEXTILE CHEMICAL DIV., BOX 1, BLVD. STA., N. Y. 59

Boston, Mass. • Salem, Va. • Greensboro, N. C. • Charlotte, N. C. • Atlanta, Ga. • Buenos Aires

SPECIALISTS IN CHEMICALS FOR WOOL, COTTON, RAYON AND ALL SYNTHETICS

WORLD-FAMOUS

SCHLUMBERGER COMB

for French-Type Worsted Mills

OUTSTANDING for ready accessibility of all operating parts (including cylindrical comb) and for remarkable cleanliness of product. Settings made quickly.

Also other worsted preparatory machinery

U. S. Representative: LESLIE A. FIELD, 230 Princeton Blvd., Lowell, Mass.

N. SCHLUMBERGER & CIE
GUEBWILLER, ALSACE, FRANCE

Founded 1808

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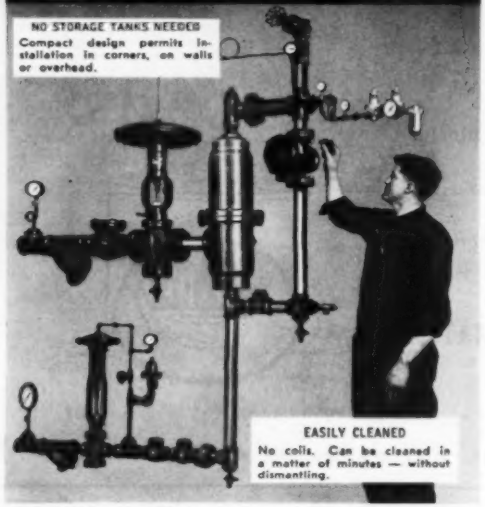
TEMPERATURE CONTROL
IS ESSENTIAL
in
BLEACHING and DYEING


NO STORAGE TANKS NEEDED
Compact design permits installation in corners, on walls or overhead.
EASILY CLEANED
No coils. Can be cleaned in a matter of minutes — without dismantling.

Pick INSTANTANEOUS WATER HEATERS
provide
ACCURATE CONTROL + REQUIRED VOLUME

HEATS WATER INSTANTLY

PICK Heaters are entirely automatic to provide and accurately maintain water temperatures up to 180° F. Water is heated instantly—by steam injection. Exclusive Pressurizer Piston eliminates pipe hammering and shaking. Installation is simple, requiring only ordinary pipe connections. Available in seven sizes with rated capacities of 10 to 200 gallons per minute.

USED BY
Exeter Manufacturing Co.
Kerritlen Finishing Co.
Guyan Mills
Jordan Manufacturing Co.
Pepperell Mfg. Co.
AND MANY OTHERS

Write Dept. TW3 for Details and Specifications

MANUFACTURED BY
PICK MANUFACTURING CO.
WEST BEND, WISCONSIN, U.S.A.

News About SUPPLIERS (Continued)

Synvar Corp., Wilmington, Del., has started operations in its Southern plant at Greensboro, N. C. The plant will produce resins for sizing, crease-proofing, and shrinkproofing of textiles.

Union Carbide & Carbon Corp., New York, has elected Morse G. Dial executive vice president. He has been with the company since 1929, since 1949 as director, vice president, and treasurer. Dr. George O. Curme, Jr., is now vice president in charge of research. Fred H. Haggerson, president, has also been elected chairman of the board of directors.

U. S. Rubber Co., New York, has appointed Willard Crater assistant sales manager of the company line of vinyl resins produced by the Naugatuck chemical division. He has been with the firm since 1949.

Woonsocket Color & Chemical Co., Woonsocket, R. I., has made Joseph G. Donharl manager of the Philadelphia district. Mr. Donharl was formerly with the Rohm & Haas and American Cyanamid companies.

RALPH L. CARR has been appointed manager of the technical-service department of Mathieson Chemical Corp., Baltimore, Md. Mr. Carr was instrumental in developing the Mathieson open-width steamer.

Wyandotte Chemicals Corp., Wyandotte, Mich., is planning a $20,000,000 expansion program that will increase production 20%. The program will be completed in 1953. A $2,500,000 research center will be completed in about a year. Frank B. Wolcott has been appointed general manufacturing manager to supervise the over-all expansion program.

Other Services

Blackman-Uhler Co., Spartanburg, S. C., Southern representative for Hilton-Davis Chemical Co., Cincinnati, Ohio, recently opened a modern textile laboratory. The service laboratory will test dyes and do other experimental work. It is staffed with graduate research and development chemists.

Farleigh-Dickinson College, Rutherford, N. J., has broken ground for a new textile building, to be completed by the end of summer. The new building will be known as the Hesslein Textile Building, in honor of the original donors. The college recently organized a student chapter of the AATCC under a charter granted in the spring.

Lowell Textile Institute, Lowell, Mass., has established a Research Foundation for the purpose of encouraging and administering research sponsored at the Institute by industry and government. An 18-man board of directors has been appointed to manage the functioning of the Foundation.

National Federation of Textiles, New York, recently elected Alexander F. Ix its new president, succeeding Henry F. Neubert. Mr. Ix is president of Frank Ix & Sons, Inc., New York, New Holland, Pa., Charlottesville, Va., and Cornelius, N. C.

U. S. Dept. of Agriculture, Production and Marketing Administration, recently awarded a Superior Accomplishment Award to John E. Larrison, in charge of equipment development at Stoneville Cotton Laboratory, Stoneville, Miss. Mr. Larrison developed an automatic bale sampler that collects lint during ginning and packages a cross-section of the bale into a true sample. The device, operated by compressed air and controlled by an electric timing element, is entirely automatic and resets itself to repeat the process for each bale.

from RUGGED OVERCOATING
to FINE UNDERWEAR MATERIALS . . .

this is your machine . . .

TOMPKINS MODEL S-1
SINGLE HEAD SPRING NEEDLE KNITTING MACHINE

Here is the finest in circular high speed spring needle knitting machines—with an extreme flexibility and a wide range of capabilities for producing different types and sizes of fabrics! It is a smooth, steady, high-speed production unit capable of turning out approximately 100 yards of overcoating materials per 8 hour day, using six feeds.

for all types of knitting constructions
BALBRIGGAN (PLAIN JERSEY) — RUN RESISTANT & MESH FABRICS
SINGLE PLUSH—DOUBLE PLUSH—PLAITING
TERRY CLOTH—PATTERN WORK
OVERPLAIDS—PATTERN STRIPING
ELASTIC FABRICS

Equipped with electric stop motion, visual stop indicator, adjustable furnishing wheels, lighting in cylinder, evenly tensioned take-up, variable speed motor drive.

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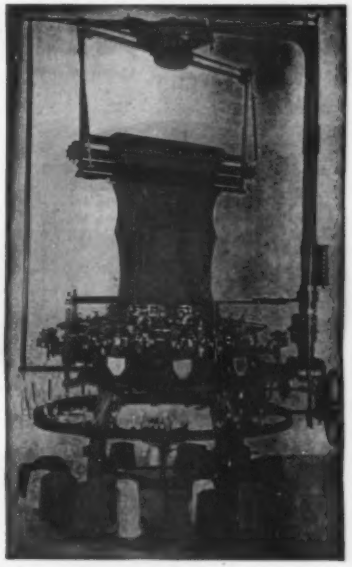


ESTABLISHED IN 1846 . . . over a century of continuous service to the knitting industry throughout the world

TOMPKINS BROS. CO.
623 ONEIDA ST. SYRACUSE 4, N. Y.

THE LOYAL T. **IVES** COMPANY

SPRING BEARD KNITTING NEEDLES

Circular, Full Fashioned, Tricot and Milanese Knitting Frames, also Narrowing, Stand, Transfer and Welt Hooks for Full Fashioned Machines, Sinkers, Jacks, Guides or Flat Eyes, Sley and Milanese Points, Transfer Points or Quills, etc.

Sheet Metal Specialties to Order

NEW BRUNSWICK NEW JERSEY

ROME SOAP MFG. CO.

MANUFACTURERS OF
Textile, Laundry
and
Special Soaps

WRITE US FOR SAMPLES AND QUOTATIONS

ROME, N. Y.

PENICK & FORD, LTD.

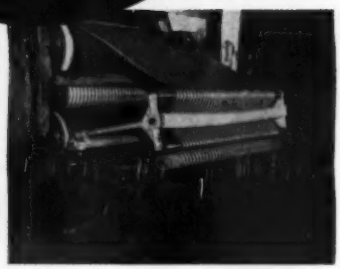
CORN STARCHES, DEXTRINES, GUMS, CORN SUGARS & SYRUPS
NEW YORK, N. Y. - - - - CEDAR RAPIDS, IOWA
SOUTHERN OFFICES: ATLANTA, GA. - - - - SPARTANBURG, S. C.

John: Douglas Crown Thin Boiling Starch is made in all fluidity ranges to suit each individual mill's requirements. Let's arrange for a trial order of the type recommended for our purposes.
Jim

You can

CUT PRODUCTION COSTS AND IMPROVE QUALITY *with*

Mount Hope FREE WHEELING EXPANDERS



Batcher Expander Installed at Virginia Fiber Corp. Petersburg, Virginia

All over the world Mount Hope Expanding Devices handle all types of wrinkling, creasing and spreading applications in textile mills. 80% of the mills in the United States use them, and nearly all machinery builders incorporate them on their machines.

Have a Mount Hope Engineer analyze your cloth handling problems—no obligation.

ANOTHER Mount Hope CLOTH HANDLING DEVICE

ASK FOR EXPANDER BULLETIN EC.

MOUNT HOPE MACHINERY COMPANY

15 FIFTH STREET • TAUNTON • MASSACHUSETTS

248 For more information, write direct or use Reader Service post card.

NEWS ABOUT Mills

Cotton Mills

Anchor Mills Co., Charlotte, N. C., has purchased the Piedmont Building in Charlotte at a reported price of $325,000 from Aetna Fire Insurance Co., as an investment.

Anniston Mfg. Co., Anniston, Ala., plans construction of one-story, 65x75-ft. cotton warehouse. Company is completing two other one-story buildings of tilt-up concrete construction to provide a waste house for both waste and general storage. Installation of new cards, spinning frames, and drawing equipment is planned as part of present expansion program.

Cannon Mills Co., Kannapolis, N. C., plans installation of a new power plant that will be completed by this fall.

Clinchfield Mfg. Co., Marion, N. C., is expanding the weave room in its Mill No. 1. Plans call for a basement area measuring 177x78 ft., a weave-room addition containing 45,500 sq. ft., and a slasher room 96x51 ft. on the first floor. Air-conditioned rooms, offices, and rest rooms also will be included.

Dixie Mercerizing Co., Chattanooga, Tenn., has awarded contract for construction of a one-story building to be used for office purposes at its Rudgeville Mills.

Eastman Cotton Mills, Eastman, Ga., continuing a modernization plan begun two years ago with installation of Saco-Lowell long-draft spinning and new Barber-Colman spooling and warping, has just completed the overhauling of all its cards. The firm has also installed Saco-Lowell continuous strippers, purchased 48 deliveries of Ideal one-process drawing, and reworked all slubbers. Thirty additional looms have been installed, as well as new folding and inspecting equipment.

Fieldcrest Mills has purchased a continuous-process bleaching unit for its Towel Mill at Fieldale, Va., to replace a number of old-style kiers and washers.

Harmony Grove Mills, Inc., Commerce, Ga., has begun construction of an addition to the present structure. The addition will contain about 27,000 sq. ft. of floor space on each of two floors.

Holyoke Fabrics, Inc., has moved its offices and manufacturing facilities from Cabot and Bigelow Sts., Holyoke, Mass., to 7 Springfield St., Chicopee, Mass.

John P. King Mfg. Co., Augusta, Ga., is installing a Logan spiral chute to handle bobbins and provide storage.

M. Lowenstein & Sons, New York, N. Y., stockholders have voted to increase its common stock from 1,500,000 to 3,000,000 shares.

Lydia Cotton Mills, Clinton, S. C., has completed its $1,500,000 enlargement and improvement program. Installation of 276 model-X2 45-in. Draper looms brings mill total to 1,560 looms.

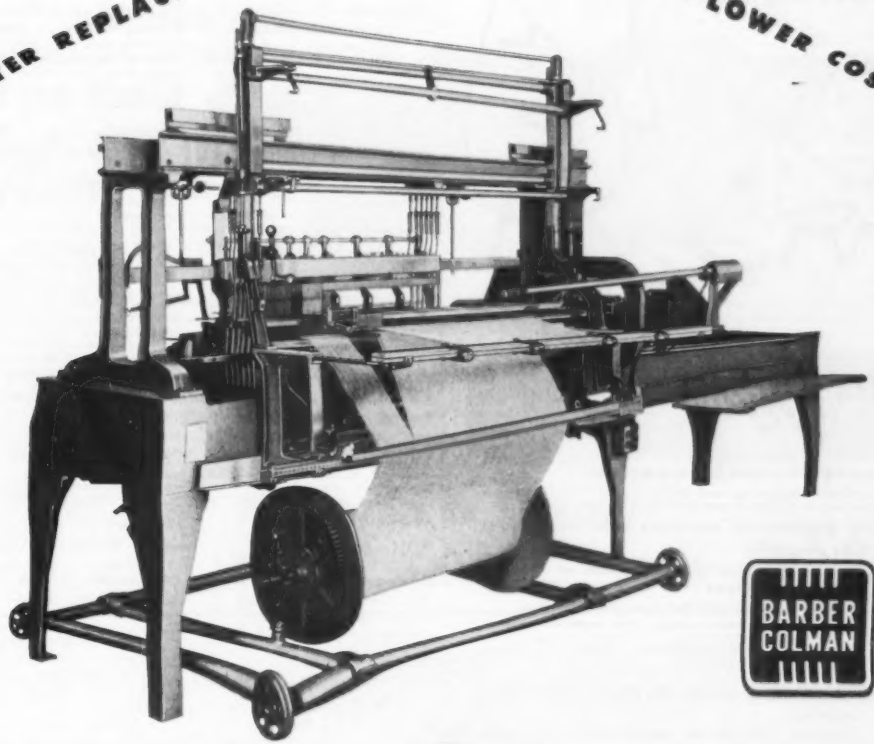
Magnolia Textiles, Inc., Magnolis, Miss., is constructing a new one-story addition at a cost of about $75,000.

Marion Yarn Mill, Boiling Springs, N. C., has completed a two-story addition, which adds 9,000 sq. ft. of floor space and enables a switch from production of carded to combed yarn.

Mayfair Mills, Inc., Arcadia, S. C., has increased its capital stock value from $3,000,000 to $4,500,000, for expansion purposes.

Morgan Cotton Mills, Inc., Laurel Hill, N. C., is planning a new addition to mill for expansion in the spinning department and for remodeling and improvement of card room.

FASTER REPLACEMENT • STRAIGHTER WARPS • LOWER COSTS



BARBER-COLMAN MODEL D *Warp Drawing Machine*

The Model "D" Barber-Colman Warp Drawing Machine is especially suited for wide sheeting mills or other mills that rarely use more than six harnesses and not more than four banks of drop wires, and that have a high percentage of drawing-in due to changes in width and quality of material.

HARNESS FRAME LENGTHS	
Size of Machine	Maximum Overall Length of Harness
48	54"
66	72"
86	92"

Field reports show up to 4600 Ends per Hour
Will draw warp from 10 to 300 ends per inch
Will draw from either flat sheet or 1 x 1 lease
Will draw from single or double beam or split sheet

Will draw 1 x 1 lease in Double Beam or Split Sheet

Draws ends through drop wires, heddles and reed all in one operation. This machine will draw practically any type of draft, either complicated or simple, with the same speed and accuracy.

MACHINE CAPACITY: Reed, 6 Harness, 4 Banks of Drop Wires
DROP WIRE CAPACITY: 9/32" through 3/4" wide

WILL DRAW

- Cotton Yarns
- Filament Yarns
- Spun Yarns
- Woolens and Worsteds
- Monofilaments

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY
ROCKFORD • ILLINOIS • U. S. A.
FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND MUNICH, GERMANY

how to prevent spoilage...

...THE *Versenes**

VERSENES* CONTROL QUALITY

In Wet Processing and Finishing the Versenes can prevent spoilage of goods in these ways:

They completely and permanently soften hardest water *without* precipitation.

- **...prevent the formation and deposition of insoluble soaps on textile fibers**
- **...remove insolubles *after* they have been deposited**
- **...assure cleaner fibers, deeper dye penetration, level dyeing**
- **...improve cleaning and foaming action of synthetic detergents**
- **...prevent and/or remove iron stains in *any* caustic solution**
- **...inactivate and prevent contamination from either divalent or trivalent metals**
- **...dissolve natural greases, oils and proteins**
- **...prevent oxidation of fats, oils, soaps, fatty acids, organic materials**
- **...give *exacting* chemical control over cations in solution.**

All of these things are vitally important to the control of quality and the prevention of spoilage in textiles.

VERSENES*—NEW SOLUTIONS TO OLD PROBLEMS

The four Versenes used in textile processing are powerful organic chelating (complexing) agents. Chemically, they are the sodium salts of ethylene diamine tetra acetic acid and other polyamino acids. Versene (regular) is the most efficient general complexing agent and water softener. *Versene* Fe-3 prevents hard water deposits and iron stains. *Versene* Fe-3 Specific is the most powerful iron complexing agent known in the normal pH range. *Versene T* prevents and removes iron deposits from fabric treated with concentrated caustic. Available in liquid form, Versene T, like all Versenes, remains stable at high temperature and pH. Ask for sample and Technical Bulletin No. 2. Write Dept. D.

NEW VERSENE WATER TEST KIT. Tells total hardness in 2 minutes. Accurate to one grain per gallon. Versenate Method. Complete Kit $5 postpaid.

"INDUSTRY'S MOST MODERN CHEMICALS" *Trade Mark

BERSWORTH CHEMICAL CO.
FRAMINGHAM, MASSACHUSETTS
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Wasatch Chemical Co., Salt Lake City, Utah
Barada & Page, Inc., Dallas and Houston, Texas
Associated Chemical Co. of Canada, 14 Darrell Ave., Toronto, Ontario
Southern Agent: Chas. S. Tanner Co., Liberty Life Bldg., Charlotte, N. C.

News About Mills (Continued)

McPherson Co., Greenville, S. C., is architect and engineer.

National Cotton Mills, Orange, Calif., recently organized, has let contract to William J. Moran Co., Alhambra, Calif., for design and construction of a new one-story mill at Orange. The plant is expected to cost about $200,000 with equipment.

Norris Cotton Mills Co., Inc., Cateechee, S. C., has let contract to Potter & Shackelford Co., Greenville, S. C., for a new addition to mill. J. E. Sirrine Co., Greenville, is architect and engineer.

Olympia Corduroy Ltd., Granby, Que., is now producing cotton corduroy fabrics in its Granby plant, where 72 British Northrop looms have been installed. Company will do all operations except spinning. The firm was established in England in 1924.

Opp Cotton Mills and **Micolas Cotton Mills**, both in Opp, Ala., have completed one of largest sanitation projects undertaken in the South by a textile firm. Cost of project was $191,000.

F. W. Poe Mfg. Co., Greenville, S. C., has let contract to Daniel Construction Co., Greenville, for one-story addition for warehouse at an estimated cost of about $95,000.

Springs Cotton Mills has its new pilot plant at Fort Mill, S. C., under construction. The building will be in shape of an elongated "T" with office space at cross-bar and with experimental laboratories filling the rest of the plant.

Standard - Coosa - Thatcher Co., Chattanooga, Tenn., is installing a Logan system conveyor for packaging operations in packing and shipping department.

J. P. Stevens & Co., Inc., New York, N. Y., has completed expansion of its cotton procurement and research building in Greenville, S. C. Area has been increased 50% through remodeling and an addition. Cotton-classifying room has been increased in size from 800 to 2,250 sq. ft.

Victor Balata & Textile Belting Co., Easton, Pa., is constructing a one-story reinforced-concrete storage building at Easton. John F. Wolff, Jr., Jenkintown, Pa., is architect.

Wennonah Cotton Mills Co., Lexington, N. C., has completed an improvement program that will expand production of rayon suitings and dress fabrics. The mill has installed 144 Crompton & Knowles C-5 4x1-box looms, weaving 48-in. fabrics that are finished to 45-in. width. An addition to the spinning room was included in the program. About 1,200 more spindles have been added and a 9-cylinder Cocker rayon slasher installed.

Woolen and Worsted Mills

Adereth Weaving Co., Herzlia, Israel, is establishing a plant capable of combing 6,200 lb. of wool daily. Estimated cost is $170,000, half of which is provided from abroad and half locally. The plant will be the first of its kind to be established in Israel. Equipment has arrived from abroad, and plant is scheduled to go into operation this month.

American Felt Co., Glenville, Conn., plans a 42x102-ft. second-story addition to its one-story mill.

Bigelow-Sanford Carpet Co., New York, N. Y., is consolidating with its wholly owned subsidiary, Bristol Mills, Inc., Bristol, Va. The company recently issued 10,000 additional shares of cumulative preferred stock, par value $100 per share.

Collins & Aikman Corp., Philadelphia, Pa., is increasing production of worsted fabrics for men's and women's apparel through expansion of spinning and weaving facilities in Bristol, R. I., plant. Approximately 120 new looms are being installed in Plant "J". Modern equipment is also being installed in Bristol plant, including a new type of roving frame, and further installations will be made on an experimental basis.

Deering, Milliken & Co. new

YOU CAN NOW WHIP THE "HARD WASTE" PROBLEM

with this new

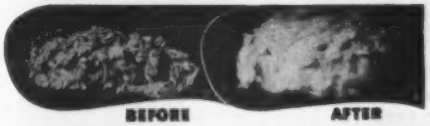
TANDEM APPLICATION of the K&D Single Cylinder WASTE MACHINE

SPECIFICATIONS
Length: 16' 1" with 5' Apron.
Width: 38" at base & 60" at cylinder shaft.
Height: 52".
Weight: 5000 lbs.

Designed to meet the need for processing unsized "Hard Waste" in cotton, rayon, or wool, this new TANDEM APPLICATION of the K & D Single Cylinder Waste Machine combines two or more single-cylinder units in one housing, with only one feed apron and one exit apron. This TANDEM APPLICATION, providing double-action waste processing on each of the unit's cylinders, is far more efficient than bulky, conventional machines with twice as many cylinders.

The mill* which sent the "Hard Waste" sample shown at right ordered one K & D TANDEM UNIT immediately after we ran their samples. They were so pleased with their installation that they have already ordered additional units! (*Name of Mill on request.)

Photo at left below is of hard twist unsized cotton warp waste. Right photo shows processed waste after just one time through K & D Tandem Unit.



BEFORE AFTER

Write, wire, or telephone for details of uses, cost, and installation of the new Tandem Application of the K & D Single Cylinder Waste Machine.

Kirkman & Dixon
MACHINE SHOP AND FOUNDRY
Greenwood, South Carolina

Manufacturers of K & D Single Cylinder Waste Machines, F-S Hopper Feeders, in any width, Sargent Combs For Hopper Feeders.

AMERICAN
SPEED-SET
GEAR CONSTRUCTION
NUMBERING
MACHINES

Clear, easily read figures; all-metal, self-inking; will cut costs and prevent mistakes in preparing price tickets and labels. Numbers changed with touch of finger.

Send for descriptive folder illustrating many printing and numbering machines specially designed for the textile industry.

Qty. 1764
Style 1235-16
No. 12345
Size 56½ 56½

American Numbering Machine Co.
ATLANTIC & SHEPHERD AVES. BROOKLYN 8, N. Y.

PATENTS PENDING

COMBINES the advantages of 3 types of oven-heating:
(1) INFRA-RED RADIATION (2) CONVECTED HEAT
(3) HEATED AIR—with added turbulence

CARBOMATIC
"UNA-RAY" OVEN

Greatly increased efficiency! For example: *40* linear feet of "Una-Ray" Oven equal the productive capacity of *70* feet of a conventional oven-type. Saves thousands of dollars in equipment cost and operational economies. No burning, scorching, spotting or marking of goods. No crocking. No "gas fading" or color migration. Uniform color is insured.

A general-purpose oven (of any capacity needed) that provides accurately-controlled working temperatures up to 550°F. For drying; drying and curing in one operation; resin fusing; Nylon setting, etc. *Write for Bulletin TW-7.*

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News About MILLS (Continued)

$2,000,000 mill at Columbus, N. C., is being equipped, according to unofficial estimates, at a cost of nearly $10,000,000. The company also plans to build a mill on a 100-acre tract at Marietta, S. C. This plant, which will be known as Hayley Mill, will contain over 100,000 sq. ft. Operations are expected to get underway by August, and between 200 and 300 persons will be employed. The mill will be similar in appearance to the seven mills constructed by Milliken interests during the past few years.

Goodall-Sanford, Inc., Minerva Mill, Sanford, Me., has installed 24 model-W3 looms.

Holyoke Worsted Co., Holyoke, Mass., has transferred its operations to Kennebunk, Me. About 75 persons are employed in weaving and finishing worsted cloth.

Island Woolen Co., Baraboo, Wis., has been acquired by Joseph H. and Michael B. Makler, heads of Waterfill & Frazier Distillery Co., Chicago, Ill., for a reported sum of $1,000,000. Operations are expected to be continued without change.

James Lees & Sons Co., Bridgeport, Pa., has awarded a $300,000 contract for construction of dryer buildings and a dyehouse addition at Glasgow, Va. B. F. Parott & Co., Inc., Roanoke, Va., is contractor. Addition will be one-story and will cover an area of 128 x 196 ft. This and the Carlisle, Pa., plant of the company recently received awards for honors in the 1950 textile-industry safety contest sponsored by the National Safety Council.

Mohawk Carpet Mills, Inc., has purchased controlling interest in Delaware Rayon Co., New Castle, Del., and in New Bedford Rayon Co., New Bedford, Mass. The two mills will eventually produce carpet rayon to supplement that being purchased for blended and 100%-synthetic carpets made by Mohawk. These mills now produce a total of 9,000,000 lbs. annually.

Alexander Smith, Inc., Yonkers, N. Y., plans a new one-story storage and distributing building on Pulaski Highway, Baltimore, Md.

Spencer Worsted Co., Pawtucket, R. I., plans an addition to its mill, to be used for office service. Richard C. Niebuhr, Pawtucket, is architect.

M. T. Stevens & Sons Co. is closing company's Pentucket Mill, Haverhill, Mass. Machinery from the plant, which formerly employed 400 workers, has been allocated to firm's other plants.

Woonsocket Worsted Co., Woonsocket, R. I., will locate one unit of its plant in Laurens, S. C., provided a building is erected and leased to them. Company will rent with option to buy plant within 10 years. A lot has already been chosen for building in Laurens. The building will be a modern one-story brick structure, 70x220 ft. McPherson Co., Greenville, S. C., has estimated that it will cost between $80,000 and $90,000. Humidity control and air conditioning will be installed by the worsted company.

Synthetics Mills

Beaunit Mills, Inc., Childersburg, Ala., plans to build a large plant to produce viscose-rayon yarn for automobile tires that will adjoin the company rayon-yarn plant. The new plant will be operated by North American Rayon Corp., Elizabethton, Tenn., a Beaunit subsidiary.

Braunsberg Bros., Inc., Clifton, N. J., has leased a one-story building in Paterson, N. J., and will use it for a weaving mill.

Burlington Mills Corp., Greensboro, N. C., has contributed two 160-needle wrap-and-reverse knitting machines to textile departments of North Carolina State College and Clemson College. The machines were taken off the company's production line. Also contributed was a year's supply of parts. Burlington is also considering a new addition to its ribbon mill at White Sulphur Springs, W. Va.

Deering Milliken & Co., Inc., has named the new mill it will construct in Greenville, S. C., Gayley Mill. The new

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Built to take a beating. Welded construction for extra strength. Round corners for easy, thorough cleaning. Made of #18 gauge stainless steel for corrosion resistance. Ears are formed under rolled rim of the pail and transmit part of the load to the rim. Capacity to 20 quarts. Write for Bulletin 7028.

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Easy to clean. For extra strength quarter inch thick reinforcing bands are welded at top and bottom. Handles of ½ inch diameter mild steel rod are welded to upper reinforcing band. Round corner bottom speeds cleaning. Built of heavy gauge stainless steel. Capacity to 100 gallons. Send for Bulletin 7029.

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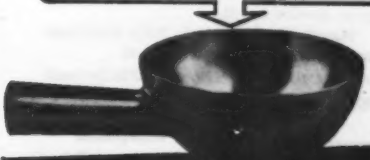
Made to withstand rough handling. Hemispherical bowl of #16 gauge 18-8 stainless steel with #16 gauge stainless tapered handle-socket welded on. Capacities 1 pint to 4 quarts. Handle of 4 quart size reinforced. Send for Bulletin 7030.



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F. C. HUYCK & SONS
KENWOOD MILLS
Rensselaer, N. Y.

News About Mills (Continued)

100,000-sq. ft. plant will produce nylon and rayon fabrics and will employ between 200 and 300 persons. Daniel Construction Co. is contractor for the mill, which will be air-conditioned and have refrigeration equipment.

Duffy Silk Co., Inc., Buffalo, N. Y., plans construction of a $400,000 nylon-throwing plant near Murphy, N. C. Plant will employ 150 persons. Operations are expected to get underway by the end of the year. C. M. Guest & Son is contractor.

E. I. du Pont de Nemours & Co. has broken ground for new $33,000,000 Dacron plant near Grangers, N. C., and has approximately $400,000 worth of material on grounds ready for construction work.

Oscar Heineman Co., Chicago, Ill., will construct and operate a rayon- and nylon-throwing plant at Salisbury, N. C., under agreement between the company and the city council. Construction will begin as soon as federal clearance for building can be obtained.

Peerless Mills Co., Belton, S. C., has begun construction on $2,000,000 rayon-weaving mill. Original plans were to construct mill last year, but work was deferred until owners were assured of obtaining new machinery for the entire mill. The building will be one-story; of steel, brick, and concrete construction; and approximately 300 ft. square. Completion is expected late this summer. Danville Construction Co. is contractor.

Revonah Spinning Mills, Hanover, Pa., expects to start a pilot plant soon at Hanover, to be known as Malcolm Mills, which will spin rayon and synthetic yarns for carpet face. Plant is expected to produce about 40,000 lbs. a week.

Slater Bros., Inc., Paterson, N. J., plans a new building at Shelby, N. C., plant to be used for weaving department.

Westover Fabrics, Inc., rayon-gray-goods mill, West Warwick, R. I., has been taken over by Norman B. Orent. It will now be known as Norman Mills, Inc.

Knitting Mills

Berkshire Knitting Mills, Reading, Pa., has formally opened its new plant in East London, South Africa. The plant is equipped with long-section, 51-gage machines which were transferred from Berkshire mill here.

Fain Hosiery Mill, Murphy, N. C., mill building and adjoining structure, have been leased by Van Raalte Co., Inc., New York, N. Y. Property will be modernized and equipped for a new storage and distribution center for the area.

George K. Garrette Co., Inc., Philadelphia, Pa., plans hosiery-plant addition to be built at Ellwood City, Pa. Construction is scheduled for this summer. The addition will be one-story of concrete block, covering an area of 100x300 ft.

Girard Knitting Mills, Philadelphia, Pa., has completed expansion of its knitting department and tripled the number of its transfer knitting machines.

Gotham Hosiery Co., New York, N. Y., will install 6 tricot-knitting machines in space leased from Holly-Knit, Inc., a subsidiary of American Yarn & Processing Co., Mount Holly, N. C.

P. H. Hanes Knitting Co. is expanding its carding and spinning departments at its Mill No. 4, Hanes, N. C. A two-story and basement structure of brick and steel, containing about 55,000 sq. ft., will be erected. Card room will be on first floor, with new spinning room on second.

Infanta Knitting Mills, Philadelphia, Pa., has purchased a three-story brick building in Rockledge, Pa., and removed all of its operations to that plant. The building contains 52,000 sq. ft. of floor space and permits expanded production.

Kingston Hosiery Mills, Kingston, Tenn., a branch of Rockwood Mills, Rockwood, Tenn., has been closed and machinery moved to Rockwood plant.

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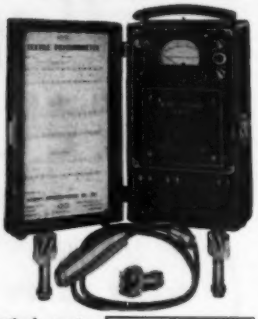

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Suitable for Cotton, Wool, Worsted, Rayon, Mixtures and other Textiles, or raw materials, yarns and fabrics.

Accurate within a tolerance of one-half of one percent.

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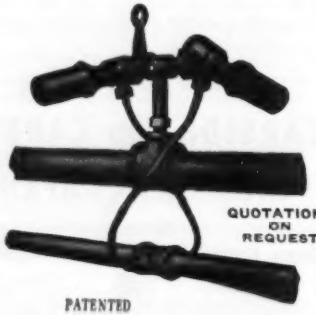

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News About MILLS (Continued)

Lawrence Knitting Mills has moved from Bessemer City, where it was established last August, to Charlotte, N. C., at 2301 North Davidson St.

Macon Hosiery Mill, Inc., Macon, Ga., plans installation of a new air-conditioning system in all departments of mill.

Montreal Knitting Co., Ltd., Montreal, Canada, plans to increase its capital by 148,000 common shares and to offer rights to common shareholders to purchase one additional share at $14 for each three held.

Mullins Textile Mills, Inc., Mullins, S. C., has completed construction of a new building. The mill performs sewing and cutting operations on knitted underwear goods and employs about 250 persons.

Newton, N. C.—Cecil W. Barringer, owner and operator of Barringer Full-Fashioned Hosiery Mill in Newton, has purchased another building here in which machinery for hosiery manufacture will be installed.

Piedmont Knitting Co., Inc., Gordonsville, Va., is installing additional 60-gage full-fashioned knitting machines.

Roane Hosiery, Inc., Harriman, Tenn., has completed construction of a mill which will specialize in the manufacture of circular-knit rayon hosiery for women.

Textron, Inc., Providence, R. I., has concluded arrangements with town officials at Elizabethton, Tenn., for lease of buildings to be erected by the municipality for a new mill to manufacture tricot-knit nylon fabrics. It has been proposed to issue bonds for $4,000,000 for building construction. Entire project is reported to cost about $7,000,000.

Utica Knitting Co., Utica, N. Y., has announced acquisition of Minneapolis Knitting Works, Minneapolis, Minn. The company also plans installation of a Tube-Tex drying unit at its Anniston, Ala., plant, as part of its expansion program. The present box plant will be moved to make room for the new processer and dryer.

Dyeing and Finishing Plants

American Thread Co. has completed work preliminary to construction of a finishing plant at Sevier, N. C. A spur line from the Clinchfield Railway line is now being built to the plant site.

Joseph Bancroft & Sons Co., Rockford, Wilmington, Del., will erect additions to its Building No. 18, which will consist of a loading shed and platform and a small addition on the fifth floor level. The additions will provide additional facilities needed to fill present requirements.

Blackman-Uhler Co., recently opened a new textile-dyeing laboratory at Spartanburg, S. C. Latest equipment has been installed, including Fade-Ometer, acid ager, printing machine, padder, and package-dyeing machine.

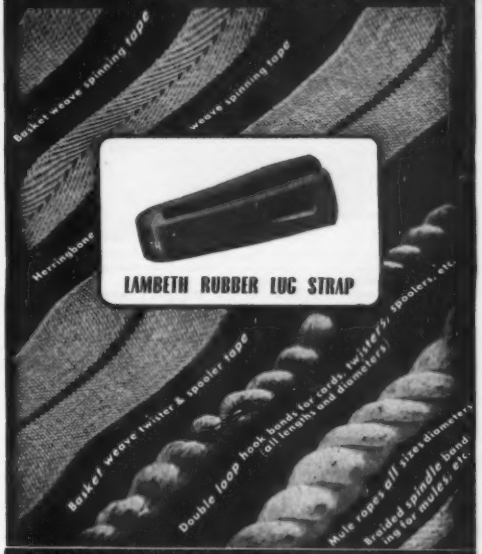
Buckeye Fabric Finishing Co., Coshocton, Ohio, plans new 60x250-ft. one-story addition to its mill. Cost is reported to be over $150,000. Fred Jacobs, Coshocton, is architect.

Excelsior Finishing Plant, Pendleton, S. C., formerly Excelsior No. 4, is having its layout revamped to conform with addition of extensive storage space just finished.

Santee Print Works, Sumter, S. C., has work going forward rapidly on erection of a new building just outside of the city limits. The new plant is expected to be completed and in operation by December. It will have 85% new machinery and will operate six printing machines with a production capacity three times that of the present establishment.

Textileather Corp., Toledo, Ohio, has installed a new clip tenter frame for cotton fabrics which is expected to increase production by about 30%. The new machine is designed to apply finishes and to dry fabrics under tension.

LAMBETH PRODUCTS
FOR SPINNING, TWISTING, SPOOLING, WEAVING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Double loop hook bands for cords, twisters, spoolers, etc. (all lengths and diameters)
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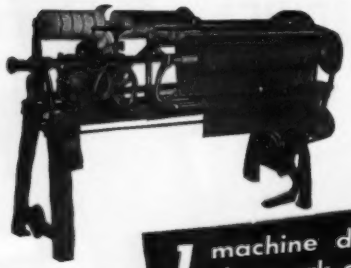
DECORATIVE TINSEL — LAME —
THREADS — CORDS — LAMINETTES
NOVELTY YARNS

UTICA Combination Winding and Cutting Machine



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NEWS ABOUT Men

E. V. Albrechston has assumed his duties as service superintendent and public relations official for E. I. du Pont de Nemours & Co., Inc., Dacron plant now under construction near Kinston, N. C.

John W. Alexander, employment supervisor since 1946 at Winnsboro Mills of United States Rubber Co., Winnsboro, S. C., has been transferred to company's plant at Hogansville, Ga., where he will succeed **Ben P. Robinson**, who has resigned.

Charles E. Babst has been named manager of production-planning department for filament-yarn and staple-fiber divisions of Celanese Corp. of America, New York, N. Y. Mr. Babst will plan and coordinate production of all yarns and fibers at various plants. **Walden E. Bassett** has been named manager of customers' service department for filament-yarn, staple-fiber, and woven-fabrics divisions of the company. Mr. Bassett will maintain liaison with operations at company plants, assist all textile customers in processing of yarns and fibers, and render service on customer problems.

William J. Brooks has been appointed assistant to A. U. Priester, Jr., vice president and general manager of HDV Division of Callaway Mills, LaGrange, Ga. Mr. Brooks has been with Callaway Mills since 1949 and was production supervisor at company Valway Mill prior to his promotion.

Donald C. Brown has been appointed resident manager of Pioneer Mills of American Woolen Co., Pittsfield, Me., to succeed **Lester H. Parkhurst.**

Harry F. Byrd, Jr., was elected to the board of Industrial Rayon Corp., Covington, Va., increasing membership of the board from eight to nine. **W. C. Miller**, treasurer, was elected controller and treasurer.

Boyd Chapman has resigned as superintendent of Aldon Spinning Mills Corp., Talcottville, Conn., and is now associated with Unionville Woolen Mills, Unionville, Conn.

Richard Clarenbach has been appointed general manager of Walther Mfg. Co., Philadelphia, Pa., to succeed **William Ross**, who has resigned. Mr. Clarenbach was formerly with M. T. Stevens & Sons Co., at Franklin Mills, Franklin, N. H.

R. P. Clark has resigned as assistant vice president and sales representative of Appalachian Mills Co., Knoxville, Tenn.

S. J. Craig, Jr., formerly in charge of dyeing at Excelsior Mill No. 1, Union, S. C., has been appointed superintendent of Hatch Mills Corp., a new Deering, Milliken & Co., Inc., plant at Columbus, N. C.

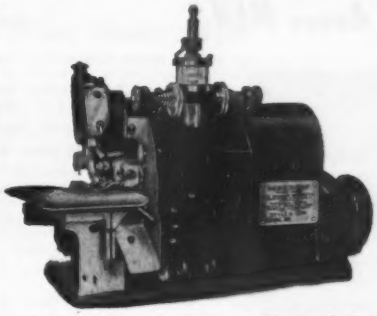
Robert L. Conn has been elected president of Puritan Cordage Mills, Louisville, Ky., to succeed the late George W. Babcock. Mr. Conn, formerly vice president, has been succeeded by **W. C. Ballard**, who had been secretary-treasurer. A stockholder, **William Brown**, has been chosen to succeed Mr. Ballard.

W. D. Crosswhite, Sr., has been named manager of Industrial Rayon Corp. plant at Covington, Va. He has been production superintendent of the plant since 1938.

Roland Derby, vice president of M. T. Stevens & Sons Co. plant at North Andover, Mass., has resigned. Mr. Derby will now give full time to Textile Aniline & Chemical Co., Lawrence, Mass.

Howard Downey has resigned as general superintendent of Lonsdale Co., Lonsdale, R. I.

Kenneth B. Doyle, former assistant superintendent of Swift River Woolen Mills,



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OVEREDGING, OVERSEAMING AND HEMMING MACHINES

For Use on Knitted and Woven Wear of all Kinds

Quality Results—High Production

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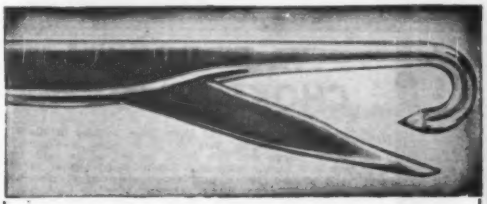

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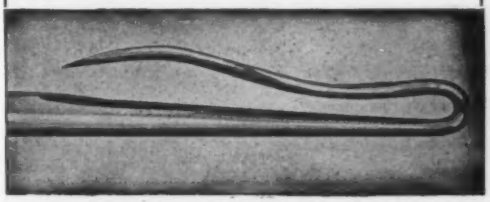

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NEWS ABOUT MEN (Continued)

Stafford, Conn., has been appointed superintendent of Mill A, Goodall-Sanford, Inc., Sanford, Me.

W. M. Dutton, who has been in charge of Vamoco Mill of Burlington Mills Corp., Franklinton, N. C., has been transferred to Newton Rayon Mills, a unit of the Burlington group at Newton.

W. H. Entwistle has been elected treasurer of Sandhurst Mills, Inc., Rockingham, N. C., manufacturers of full-fashioned hosiery. Mr. Entwistle was also elected president of company to succeed Robert L. Cole, who has retired.

Walter Goddard, former manager of Hockanum Mills, Rockville, Conn., has been made general manager of mills of M. T. Stevens & Sons Co. at Andover, Mass.

H. W. Halvordson, former sales representative in the St. Louis district office of A. & M. Karagheusian, Inc., has been transferred to the Atlanta office of the company.

John D. Hogan, Jr. has been appointed to yarn process-development department of Goodall-Sanford, Inc., Sanford, Me., and will work under direction of E. Everett Nutter. Mr. Hogan was formerly product and sales manager of Cooriedale Mills, Moosup, Conn.

Luther Hodges, formerly general manager and vice president of Fieldcrest Mills, Leaksville, N. C., has resigned his position with ECA in Frankfurt, Germany.

Don S. Holt was recently elected a vice president of Cannon Mills Co., Kannapolis, N. C., succeeding **Alexander R. Howard,** who retired early this year. Mr. Howard will continue to serve as a member of the board.

J. Paul Jones, supervisor of the cost-accounting section of American Enka Corp., Enka, N. C., has been promoted to assistant controller in charge of costs.

David L. Judson is now vice president in charge of purchasing and research for Mock, Judson, Voehringer Co., Greensboro, N. C., a subsidiary of Mojud Hosiery Co., Inc.

Edward P. Killackey has been named treasurer of Celanese Corp. of America, New York, N. Y. **William L. O'Donovan** has been made vice president for general sales; **Bjorn Andersen,** vice president for research; and **K. C. Loughlin,** vice president for Southern sales.

Steve Kuchar has been appointed superintendent of Duplan Corp. mill in Lincolnton, N. C. He has been with the company at Hazleton, Pa., for past 39 years.

Harold W. Leitch, general superintendent in charge of research of Pacific Mills, Lawrence, Mass., has been appointed a member of the Massachusetts Advisory Committee on Water Pollution Control. Mr. Leitch will represent Massachusetts woolen textile manufacturers in direction of the control program.

Lonnie Long of Bath Mills, Bath, S. C., a division of United Merchants and Mfrs., has been appointed master mechanic of firm's new mill now under construction at Clarksville, Ga. A graduate of N. C. state in 1949, Mr. Long has been a member of the company regular apprentice-training program. **Zebulon B. Lane, Jr.** has been made manager of the new mill.

Rudolph L. Lucia has been named manager of hand-knitting yarn department of Botany Mills, Inc., Passaic, N. J. Mr. Lucia will continue to serve as manager of the export department as well.

Willfred W. Lufkin, Jr. has been named vice president of Wellington Sears Co., New York, N. Y. Mr. Lufkin was a director, vice president, and general sales manager of Dan River Mills, Inc., before joining Wellington Sears.

Norman Major, superintendent of Newton Rayon Mill, Newton, N. C., since January, 1950, has been transferred to Shannon, Ga., where he is now superintendent of weaving at Brighton Mills plant.

Rex R. Maltbie, Paris, Ill., has joined Mohawk Carpet Mills, Inc., Amsterdam, N. Y.,

News About MEN (Continued)

as controller of company subsidiaries.

Edward F. March has been elected vice president and controller of Columbia Mills, Inc., Minetto, N. Y. **Harold E. Wilkins** was elected vice president in charge of production; **Charles A. Cato,** treasurer; **James A. Reynolds,** assistant secretary. Other officers were reelected.

Travis J. Martin, formerly superintendent of United Rayon Mills of United Merchants and Mfrs., Inc., at Old Fort, N. C., has been promoted to manager. **Daniel A. McCanless,** superintendent since 1948 of United Rayon Mill at Elberton, Ga., has been promoted to the position of manager of the Elberton plant.

J. W. Medford is now executive vice president of Springs Cotton Mills, Lancaster, S. C. Mr. Medford has been treasurer for past eight years and now succeeds **H. R. Rice. J. C. Hubbard** has succeeded Mr. Medford as treasurer and continues in his previous office of secretary.

Herman K. Moeller has been named manager of fabric-development section of the Rayon Div. of E. I. du Pont de Nemours & Co., Wilmington, Del., succeeding **E. A. McAbee,** who has resigned.

R. W. Mortenson has become manager for Dorr Woolen Co., Guild, N. H. He recently resigned as resident manager for Baltic Mill, Enfield, N. H., and Mascoma Mills, Lebanon, N. Y., both of American Woolen Co. **Lester H. Parkhurst** will succeed Mr. Mortenson as resident manager of Mascoma and Baltic Mills. For past 15 years Mr. Parkhurst has been resident manager of Pioneer Mills, also of American Woolen Co., Pittsfield, Me.

Ralph Raemer has been named controller for Globe Knitting Works, Grand Rapids, Mich.

Albert Ruth has been elected president of New Bedford Rayon Co., New Bedford, Mass. **Leon H. Ryan** was elected vice president; **H. G. Rounsevell,** treasurer; **Peter A. Green,** vice president and superintendent; **and S. C. L. Delano,** secretary and assistant treasurer. Controlling interest in New Bedford Rayon Co. was recently acquired by Mohawk Carpet Co.

I. T. MEYER has been appointed vice president in charge of manufacturing of Industrial Rayon Corporation, Cleveland, Ohio. He will have his headquarters at the company's executive offices in Cleveland. Mr. Meyer, who has been manager of the rayon firm's Covington, Virginia, plant since 1949, joined Industrial Rayon as a production supervisor in 1928.

Frank P. Samford, president of Liberty National Life Insurance Co., Birmingham, Ala., has been elected to the board of directors of West Point Mfg. Co., West Point, Ga.

Albert Schumacher, has been elected vice president of the worsted division of Crown Mfg. Co., Pawtucket, R. I., by the board of directors. Mr. Schumacher has been general manager of worsted division since 1949.

Lewis F. Shackleford has joined the staff of Monroe Cotton Mills, Monroe, Ga., and will serve as an industrial engineer. He was formerly employed by Pacolet Mfg. Co., Gainesville, Ga.

Robert J. Stack has been named president of National Automotive Fibres, Inc., Detroit, Mich., succeeding **J. R. Millar,** who will continue as chairman of the board.

Robert Stevens, timestudy engineer for the hosiery industry under the National Labor Agreement, has resigned to take a position with Wayne Knitting Mills, Fort Wayne, Ind. No successor has been named to date.

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News About MEN (Continued)

W. T. Stockton has been appointed comptroller of J. P. Stevens & Co., Inc., succeeding **C. E. Baxter**, who has resigned to accept a new appointment with Carter Fabrics Div. of the company at Greensboro, N. C. Mr. Stockton has been associated with company and its predecessors in the South since 1937. Since 1949 he has served as divisional comptroller of the Carter operating group. He will be located in New York.

Abe Straus and **George P. Swift** have been named as new directors of Wayne Knitting Mills, Fort Wayne, Ind. Mr. Straus is chairman of board of Archer Mills, Inc., Columbus, Ga., a wholly-owned subsidiary of Wayne Knitting Mills.

William B. Terry, has been appointed treasurer of Julius Kayser & Co., Brooklyn, N. Y., succeeding **Albert G. Flume**, who has retired after 32 years of service with the company. Mr. Terry was formerly general sales manager of the firm and has been succeeded in this position by **John J. Murphy.**

E. Raymond Truell is now general manager of Dorlexa Dyeing & Finishing Co., Woonsocket, R. I. He has been associated with R. Wolfenden & Sons, Attleboro, Mass., for last 20 years.

A. T. Tuttle has assumed duties as manager of Covington Weaving Mill, Covington, Va., after being transferred from Asheboro, N. C., where he was plant manager of Asheboro Weaving Mill. He replaces **David L. Reid**, plant manager at Covington for past three years. Mr. Reid will become superintendent of Asheboro Mill.

S. C. Veney, who has recently resigned as Southern division manager of Duplan Corp., with office at Greensboro, N. C., has accepted a position as plant manager of Stonecutter Mills Corp., Spindale, N. C.

Fred Walter, formerly division manager of Wamsutta Mills, Atlanta, Ga., has been appointed industry analyst in the textile division of NPA, Washington, D. C.

Jack Welborn has been appointed assistant to C. P. Gordon, superintendent of dyeing and finishing plant of Riegel Textile Corp., Trion, Ga. Mr. Welborn was formerly overseer of finishing and has been succeeded in that position by **D. C. Alexander.**

Stephenson Wells, president of Minneapolis Knitting Works, Minneapolis, Minn., has been named to board of Utica Knitting Co., Utica, N. Y. **Earl W. Dunmore**, president of Utica, and **Russell L. Lawson**, executive vice president, have been named directors of Minneapolis Knitting Works, which was recently acquired by the firm.

S. W. Weltman was recently elected both president and a director of International Braid Co. of Canada Ltd., St. Rose de Laval, Que., succeeding the late Jacob Ziskind.

Noel E. Williams has been appointed industrial-relations manager of Winnsboro Mills of U. S. Rubber Co. at Winnsboro, S. C. Mr. Williams, who joined the company in 1943, has served as employment supervisor, industrial-relations supervisor, and personnel supervisor at Winnsboro.

OBITUARY

Alston J. Crandall, 86, president since 1924 of Ashaway Line & Twine Mfg. Co., Ashaway, R. I., died recently.

Joseph Edwards, 51, president and founder in 1940 of Cavendish Knitwear Corp., New York, N. Y., died recently.

Harry W. Griffin, president of Taylor-Stiles & Co., Riegelsville, N. J., died recently. Before becoming president in 1945, he served as secretary and treasurer of the firm.

Frederick L. Jenckes, president of National Ring Traveler Co., Pawtucket, R. I., and former head of Manville Jenckes Co. and Jenckes Knit-

OBITUARY Cont.

ting Machine Co., Pawtucket, died recently.

John H. Lacouture, 66, chairman of the board of directors of Guerin Mills, Inc., Woonsocket, R. I., died recently. Before assuming the post of board chairman, he was president and treasurer of the mills for 15 years.

Ernest Rees, president of Elk Cotton Mills, Fayetteville, Tenn., died recently.

Frank W. Reynolds, 83, an original partner in Lockwood Greene & Co., Boston, Mass., and for over 20 yr. head of the engineering division of the firm before its 1928 reorganization, died recently.

Parker M. Smith, 57, president since 1937 of Smith, Drum & Co., Philadelphia, Pa., died recently. Mr. Smith, a son of one of the company founders, entered the firm in 1912.

Ross W. Baker, 75, for many years treasurer of Lawrence Mfg. Co., Lowell, Mass., died recently.

James P. Brown, 59, secretary and assistant treasurer of Glencairn Mfg. Co., Pawtucket, R. I., died recently.

Robert Cluett, Jr., 82, retired vice president of Cluett, Peabody & Co., Troy, N. Y., and son of the company founder, died recently.

Sam Hyman, 47, vice president of Catalina, Inc., Los Angeles, Calif., died recently.

Clarence A. Carroll, 54, Atlanta district sales manager for Acme Steel Co., Chicago, Ill. died recently.

Earlin C. Corker, 45, supervisor of Virginia Fibre Corp., Petersburg, Va., died recently.

Emile Montalent, retired salesman in New York office of General Dyestuff Corp., New York, N. Y., died recently. He joined H. A. Metz & Co., a predecessor of General Dyestuff, in 1899.

Harry S. Pos, 66, director of purchases of American Enka Corp., Enka, N. C., died recently.

DAVID C. SCOTT, internationally known authority in the field of physical testing and president of Scott Testers, Inc., Providence, R. I., died recently. Mr. Scott had been an officer of the firm and its predecessor, Henry L. Scott Co., since 1900 and its president since 1936. An early member of the ASTM, he was also a member of the Textile Institute of Manchester, England, and the Textile Research Institute, Princeton, N. J.

W. B. Pursifull, 37, purchasing agent for Cranston Print Works in Fletcher, N. C., died recently.

James B. Utley, 46, research chemist at Dan River, Danville, Va., died recently of a heart attack. He had been with the company since 1942.

Joseph Wilkinson, 75, retired assistant resident manager of Wood Mill of American Woolen Co., Lawrence, Mass., died recently.

G. J. Harvey, 62, former superintendent of United Cotton Products Co., Fall River, Mass., died recently.

Frank H. Hogg, superintendent of wool and yarn department at Bigelow-Sanford Carpet Co., Amsterdam, N. Y., plant, died recently. He had been associated with various plants of the company since 1904.

John R. Burke, 71, overseer for a number of years with Victoria Cotton Mills, Rock Hill, S. C., died recently.

Frederick E. Junier, 50, an overseer with Globe Mill of American Woolen Co., Utica, N. Y., died recently.

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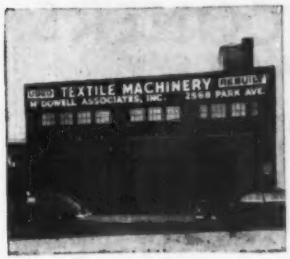

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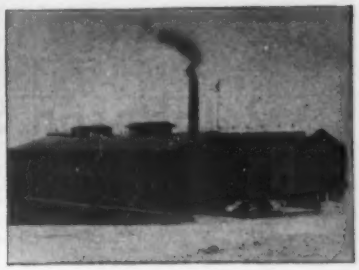

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42 Draper mod. D, 82", 24 har. head, C&K bobbin boxes, mtrsd.
4 C&K, Veri-best, 108", 25 har. head, mtrsd.
7 C&K, 110", 4x1, 25 har. head, mtrsd.
18 C&K, 82", 4x4, 25 har. head, 1950 model, belt drive.
24 C&K, 82", 4x4, 25 har. head, mtrsd.
12 C&K, 92", 4x4, 25 har. head, mtrsd.
3 C&K, 108", 4x4, 20 har. head, belt drive.
10 C&K, 110", 3x3 cam looms, mtrsd.
34 C&K, S-5, 56", 20 dobby, mtrsd.
19 Draper E cam 44", mtrsd.
90 C&K, 52", 2x1, auto. 20 har., Gem Head. mtrsd.
180 C&K, 44", 1x1, box, 20 har. dobbies, mtrsd.
40 C&K, 1x1, 48", 20 har. dobbies, mtrsd.
48 Draper K 44", 25 har. dobby, mtrsd.
16 C&K, C-4, 48", 4x1, 4 har. mtrsd.
32 Draper XK Cam, 44", mtrsd.
24 C&K, 4x4, 80", 20 har. dobby with jacquards, mtrsd.
90 C&K, S-5, 54", 2x1, 20 har. dobbies, mtrsd.
96 C&K, 2x1, 52", 20 har. dobbies, mtrsd.
20 C&K, 2x1, 56", Gem Heads, mtrsd.
200 Draper XD, 44", 20 har. dobbies, mtrsd.
90 Draper XK, 44", 20 har. dobbies, mtrsd.
9 Draper XK cam, 44", mtrsd.
21 Draper X cam, 44" mtrsd.

WOOL SPINNING

3 CARDS, woolen, 3 cyl., 60"x80", all iron Tape Condensers
5 CARDS, woolen, 3 cyl., 48" wide x 60" dia. Tape Condensers
2 CARDS, woolen, 3 cyl., 60" wide x 48" dia. Tape Condensers
3 CARDS, woolen, 3 cyl., 65" wide x 48" dia., iron (German) Tape Condensers
3 CARDS, woolen, 3 iron cyl. 60" face x 48" dia. Ring Condensers
6 CARDS, woolen, 72" wide x 38" dia. 3 cyl. iron Tape Condensers
5 Frames, Spinning, Whitin, model A, 2½" ring, 180 spdle.
2 FRAMES, Spinning, Whitin, 1941 model, 5" ring, 120 spdle.
3 GARNETTS, with common runoff apron
2 GARNETTS, 80"x20", 3 cyl.
1 MIXER and BLENDER, Stock, air driven
1 MULE, Giant Package, 285 spdle., 1945
8 MULES, Giant Package, 360 spls., 1946
2 PERALTAS, 48"
1 PICKER, Shoddy, Garnett Type, 20" x 30" dia. Garnet Cyl.
1 PICKER, Mixing, D.&F. 6 bar, 40"
1 PICKER, Burr, C&M 24"
1 PICKER, Fearnaught, D.&F. iron, 48"x48"
2 PICKERS, Fearnaught, C.&M. wood 49"x48"
1 PICKER, Burr, Sargent, 38"

WORSTED EQUIPMENT

8 CARDS, Worsted S.A.C.M. 2 cyl., 60" wide, rebuilt
16 COMBS, Noble, Taylor Wadsworth, auto. coiler and oil regulators
37 COMBS, French, S.A.C.M.
2 DRAW BOXES, P.S. 24 spdl. 12x6, 1948 model
6 DRAW BOXES, P.S. & Stells, 12 spdl. 14x8, 4" front roll, 1948 model
5 GILL BOXES, P.S. Intersecting, 12 ball creel, 2 spdl. 14x9
2 GILL BOXES & CREEL, Schlumberger, 8 head intersecting
2 REDUCING FRAMES, Platt Bros. double delivery, 16 and 18 heads
2 PUNCH BOXES, James Smith,. 17" dia. x 9" wide, 4 feeds
2 SPINNING FRAMES, Worsted, McGlynn Hayes, French type, 1947 model

COTTON SPINNING

2 BALE BREAKERS, Saco-Lowell, F-4
55 CARDS, Mason, 40", 27" doffers
6 CARDS, Platt, 42", 27" doffers
40 COMBERS, Nasmith, 13" coilers
1 PICKER, single process, rebuilt 1945
5 ROVING FRAMES I-3 long draft
5 SLUBBERS Saco-Lowell 11x5
21 SPINNING FRAMES, Whitin, 1½ rings

DYEING AND FINISHING

1 BRUSH, C.&M., vert. 2 roll 54"
1 BRUSH, Cleveland 6/4 up and down
1 BRUSH, Treadle 40" new
1 BRUSH, Crosser 40" new
1 BRUSH, Velour with beating machine 70"
1 CALENDER, Hauboldt 112" wide, 4 roll, 12 ton lever pressure
2 CALENDERS, Embossing, 72" with 14" diameter steel roll, 28" dia. paper roll, lever pressure, motors
1 CALENDER, Hydraulic, Hemsikens, 100 ton hydraulic, 80" 3 roll, motors
6 CHINCHILLA machines 40"
1 CRABB, Yorkshire 72' stainless steel tanks
1 DEWING machine, C.&M. 66"
2 DOUBLING, WINDING & MEASURING Machines, P.&W., Springfield type, combination open roll and doubling 68", motors
1 DRYER, Loop, P&S 82", rev. sticks, 3-80" fans, motors
1 DRYER, Loop, Philo. Mach. Co. 82", rev. sticks, rebuilt 1950, 12 individual motor driven fans
1 DYE TUB, Paw Stock, Klauder Weldon, 1000 lbs., S.S. lined
1 EXTRACTOR, Tolhurst 48" Suprex 1947 mod. S.S. basket, motor
1 EXTRACTOR, Troy Mercury, 1945, S.S. basket, motor
2 EXTRACTORS, Amico, 72", copper basket, motors
1 FOLDER, Racking, 78" wide, adjustable, 18" to 42" fold
1 FOLDER, E&H silk, 44" cloth, adjustable 1-11¼ yds.
1 FOLDER, E&H, 104" cloth, adjustable 24" to 44"
6 GIGS, wet tenzling 4 contact, 84"
2 INSPECTION MACHINES, C&M, 60" cloth, type A rolling head
1 NAPPER, Woonsocket 88" ballbearing D.A. 24 roll, motor
1 NAPPER, Gessner D.A. 80", 18 roll, motor
1 NAPPER, Gessner, 80" D.A., 24 roll, 1948 model, motor
1 NAPPER, D&F 80", 20 roll, knit goods
1 POLISHING MACHINE, 60" cloth, plush type
1 PRESS, Gessner 68" rotary steam type
1 PRESS, Voelker, 84" rotary steam type
1 PRINT MACHINE, Rice-Barton, 7 color, 52", mains
1 PRINT MACHINE, R.B.&F. 7 color, 44" face with dry tower, washer, motor
1 PRINT MACHINE, R.B.&F. 3 color, 52"
1 SANDING & WAXING MACHINE, P.&W., 2 cyl. 66"
2 SHEARS, P.&W., model A, 2 bl., 66"
2 SHEARS, C.&M. woolen type, 2 bl. 66"
2 SHEARS, plush type, single bl., 66"
1 SHEAR, C.&M. carpet, 18 ft.
1 SLASHER, hot air type, 80" beam headway
1 SQUEEZE SET, Quetsch, 2 roll, 65"
1 SQUEEZE SET, Quetsch, 3 roll, 50"
1 TACKING MACHINE 90"
1 TENTER FRAME, Pin 40', 72" wide
1 TENTER FRAME, Clamp, 30' x 64", S.S. plates, B.B.
1 TUBER, V.V. 60" motor

MISCELLANEOUS

1 BLENDER, Stock, air driven
1 CREEL, Magazine, Sipp Eastwood, 748 ends
20 CREELS, direct weaving, 432 spdls. ea.
1 CUTTER, C.&M. loop warp
1 KNOTTER, model "C" Barber-Coleman, rebuilt 1950

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22,000	Stainless Steel Steaming Shafts	4 1/2"	3 3/8"	1 3/8"
22,000	Fibre Head Winding Spools	3 1/4"	3 3/8"	1 5/8"
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Motorized - 80 & 100 spindle 4" & 5" spindle spacing

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1—Palmer 54" x 60" diameter, blanket, etc.

1—Palmerette 60" x 42" diameter, blanket, etc.

1—60" x 40' Tenter Frame, enclosed gears, stainless steel top opening clips, motor and reeves.

1—National 8 fan Loop Dryer, 108" revolving poles, built new 1949.

1—72" Singer, 2 gas burners, blowers and motors.

2—60" Examining Machines, motors.

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2,250M—Flat Steel Heddles—10", ⅛" eye
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5—#90 Universal Winders with Bunch-builders
1—72" Sipp Warper
1—83" Sipp Warper
4—120 Spindle Sipp Winders
1— 80 Spindle Sipp Winder
1—Blake Measuring Machine, 58" Drum
1—Herman Measuring Machine, 58" Drum

Looms are non-automatic and are equipped with feelers, pick clocks, warp stop motions, let-offs, beams, ½ HP, 3/60/220 motors.

20—60" Reedspace C&K 4x1 Looms, 20 Harness Dobby, Side Center Filling Motion, Plain Bearing, 2 shift pick counters, individually motor driven.
13—C&K 2x1 56" Reedspace oversize shuttle box, individually motor driven, 20 hook double index dobbys, 2 shift pick clocks, 1½ beams per loom.
9—C&K 2x1 52" Reedspace, oversize shuttle box, individually motor driven, 20 hook double index dobbys, 2 shift pick clocks, 1½ beams per loom.
20—60" Reedspace C&K Plain looms, 20 harness double index dobby, plain bearings, 2 shift pick counters, motor driven.
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24—C & K 92" 4 x 1 Automatic Looms, M.D. 25 harness.
48—Draper Model E Looms 36" R. S.
48—Draper Model E Looms 60" R. S.
6—Collins Twisters, tape drive, 2½" ring, 3½" ga.
1—Barber Coleman Yarn Conditioner, complete, new.
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1—Rice, Barton & Fales Print Machine, 8 colors, 50" wide
1—Rice, Barton & Fales Print Machine, 8 colors, 64" wide
1—Rice, Barton & Fales Print Machine, 7 colors, 45" wide
1—Rice, Barton & Fales Print Machine, 6 colors, 45" wide
1—Rice, Barton & Fales Print Machine, 5 colors, 42" wide
1—Rice, Barton & Fales Print Machine, 8 colors, 48" wide
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200—Copper rollers, 44" width, 14½-16" circumference

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Dalglish Pin Tenter Frame 100' long x 60" wide, Proctor & Schwartz 80' housing, Morrison Micro-Set Padder, 60", Proctor & Schwartz Cure Loop Dryer, Age 1947.

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1—Butterworth 90' Tenter Frame, 54" wide, Motor driven
2—Textile Agers, 20' long, 56" wide, M.D.
1—Van Vlaanderan Tenter Frame, 90' long x 60" wide, w/Nat'l housing 40' long
2—Butterworth Tenter Frame, 30' long x 70" wide, M.D.
1—Van Vlaanderan Hydraulic Calendar, 50", 3 rolls, 80 ton, M.D.
1—Van Vlaanderan Calender, 50", 2 paper, 1 steel roll. M.D.
10—Van Vlaanderan Stainless steel dye jiggs, 50" & 70" wide, tensionless, M.D.
1—General Decatizer, 52" wide, double cylinder, M.D.
1—Verdain Hydraulic Padder, 50" wide, 2 rolls, 12 ton, M.D.
1—Hercules Centrifugal Extractor 60", M.D.
2—Van Vlaanderan Palmers, 64" wide x 60" dia. w/quetschs
1—Van Vlaanderan Palmer Tenter Unit 60"x60', tenter 50"x50'
1—Hinnekens Padder, 52" wide, 2 rolls, M.D.
2—Van Vlaanderan Net Conveyor Dryers, 30' long x 60" wide, M.D.
4—Copper jacketed Mixing kettles, 50 gallons & 100 gallons
1—Acid Ager, 18' long x 60" width of mouth piece, 18 top rolls

Weaving Machines

400—Crompton & Knowles automatic looms, 40" cloth, 4x1 box motors, M.D. large amount of supplies
150—Draper Model X 52", cloth automatic looms, M.D.
229—Draper Model XD, 44" cloth, Age 1940-41, M.D.
300—Draper E Model looms, 40", Roper let off, M.D.

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1—55" 9 Roll Holyoke Cal.
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16—H&B 45" Cards
4—50" SS Werner Dye Becks
5—New Van Dorn Dye Becks, 10' & 12'
1—48" Tolhurst Cop. Basket Extractor
1—VV 60" Rub. Lined Basket Extractor
1—5 Can Fin. Mach. Textile 38" Face
40—Draper Model K 40" Cloth Looms
12—C&K Terry Towel 42" Looms
21—Draper X 44" Cloth Looms, Mtrs.
15—Draper XK 44" Cloth Looms, Mtrs.
80—C&K 4x1 auto. 48" Cloth Looms
25—C&K Sqle. Shut. 8 Harness, 46" RS
36—8-5 56" B.S. Dobby Looms, Mtrs.
24—C&K 4x1 82" cloth W-2 Looms
8—C&K 82" R. S. Hea. worsted auto. Pick & Pick Looms
7—Draper 88" R. S. Mod. D Looms, Mtrs.
18—Column Type Ribbon Looms
16—S&U Ribbon Looms 70 to 112 spaces
2—J&B Mules 132 Spdls. 2" Ga.
1—Kitson Big Ben Rag Picker
1—6 Col. 12" Ribbon Print Mach.
1—52" 5 Can Johnson Slasher
1—Firsching 42" Rotary Slitter
1—VV 72" Tuber. Mtr. Drvs.
1—Barber Coleman Warp Tying-in Mach.
1—Sipp Eastwood 84" Warper & Creel
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50 #90 winders
1 million Duplex rayon heddles, 13"
½ million Ariex rayon heddles, 13"
1500 harness frames, 48½" wide, 13" heddle
1200 harness frames, 45" wide, 12" heddle
12 48" K model looms, 52½" reed space, fine cut gear, changed for rayon
130 Garfield threaded beams, will open up from 42" to 47"
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1—67½" Yale Semi-Decator, 36" dia. cylinder
1—Set French Drawing (16 machines)
1—62" P&S Rev. Stick Loop Dryer
1—56" Continuous Vat Dyeing Machine, complete (Late Model)
1—28 Stick S/S lined Klauder-Weldon hoist type Dyeing Machine
3—40" Hunter 1941, 8-cylinder double doffer Garnetts, complete, with running out aprons, compression rolls, batt folders, slitters, P&S cone willow

LOOMS

200—48", 52", 54", 58" R.S. C&K Plain Silk Looms, 20 h., motor driven
75—49½" R.S. Draper Model E Rayon Looms, 16 harness
90—52" R.S. Draper Mod. D Dobby Looms
52—52" R.S. Stafford 2x1 Dobby Silk Looms, motor driven
20—52" R.S. C&K 2x1 Plain Looms, Gem heads, motor driven
30—54" R.S. C&K 4x1 Plain Looms, dobbies, motor driven
10—58" C&K 2x1 5-3 Auto. Shuttle Change Looms, 25 harness
24—72" R.S. Draper Mod. D 2x1 Looms, with jacquards
8—72", 84" R.S. C&K 4x4 Box Looms with jacquards
30—72", 92" C&K 4x4 Box Looms, motor driven
60—79½", 92" Draper Mod. D Looms, 20 harness, motor driven
10—82" C&K Varibeat Looms, 25 h., motor driven
100—82", 92" C&K 4x1 Auto., 25 harness Looms, motor driven
8—100" C&K 2x1 Auto. Looms, 25 harness
8—110" C&K 4x4 Box Looms, 25 harness
8—Paul Muller Label Looms, 1938-44, with C&K Jacquards
2—360 sp. J&B 3" gauge Mules, Brand New (in original crates)
4—45" 3 and 5 roll Padders
1—72" Birch Bros. 4-burner Singer (like new)
1—60 ft. 41" opening Butterworth clip Tenter
1—70' x 140" Textile Pin Tenter, carbomatic gas burners, electric controls
1—Cocker 1948 High Speed Warper with one 1200 end and one 1520 end creel, with Reeves drive, motors and controls, used only six months

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Quadruple Roll—4 String
Chrysler Rubber Covered Steel Sectional Fulling Rolls
Approx. 6½' W x 10' 5" to 8 x 7' D
Wood with Stainless Steel Box or Throat
Year 1943-41—Used very little
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Including 40 HP motors

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12 WORSTED COMBS
All Rebuilt by James Smith
65" Rack—Pinning 45-49

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54" Diameter & 54" Face
Brunswell Feed
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166 C&K 2x153 automatic shuttle changing — motorized looms complete—will weave 52" cloth.

128 C&K 2x1 automatic bobbin changing looms complete—weaving 50" cloth.

1 Smith drum 7 arm stainless steel, motorized dyeing machine excellent condition.

42 C&K 5-5 automatic bobbin change motorized loom complete.

C&K 4x4 72" large shuttle boxes motorized, complete — weaving 68" cloth.

20 C&K 4x4 large shuttle boxes motorized loom — complete, weaving 52" cloth.

80 Atwood Monarch type double deck spinners, motorized, 184 spindles each, complete excellent condition.

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Also 5 and 3 can slashers.

Complete line of winding, warping, quilling and coning machinery complete line also of mill supplies.

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FRONT WHIP ROLLS
for 6 foot dye kettles
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Automatic Shuttle Change

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Denting and Auto.
Reaching-In Machine
1948

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12—C&K, 56", 4x1 Non-Auto
40—C&K, 52", 54", 4x1 Non-Auto
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2—72" Silk Warpers

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Both Testers rebuilt by Scott Testers, Inc.

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1—66" 4-Burner Singer, V. V. with cooling cylinders and brushes
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1—50" Morrison Button Breaker, Ball Bearing
1—Set 16 Copper Dry Cans 80"
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1—62" New Boomer
1—4-Roll 41" Calender, K. & G.
1—60" E. & H. Flat Folder
1—48" Hermas Inspection & Measuring Machine
1—48" Hinnekens Examining Machine
1—60" Park Woolson Single Blade Shear

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49 STATE STREET — PATERSON, N. J.
Sherwood 2-1367 — Lambert 3-9523

Tricot Quality

(Continued from page 110)

360° dial to indicate whether the elements are operating at all stages in proper adjustment. These checkpoints are established after arbitrary zero is set when the head of the rising needle is flush with the top of the sinker:

1. The point at which the apex of the needle head is directly under the center of the back guide traveling backward.
2. The point at which the apex of the needle head is directly under the center of the front guide traveling backward.
3. The point at which the needle reaches its highest position.
4. The point at which the presser just closes the needle beard.
5. The point at which the presser permits the opening of the needle beard.
6. The point at which the needle reaches its lowest position.
7. The point at which the sinker reaches its backwardmost position.

If the elements are not set according to the requirements, proper adjustments are made. These adjustments include setting the correct depth of the needle in the sinker throat, aligning all needle heads in the same horizontal line, vertical adjustment of the needle bar, horizontal alignment of the sinkers, presser bar adjustment—vertically and horizontally, guide bar adjustment—vertically and horizontally.

When the proper end-element settings have been made on the base machine, the other machines are set to correspond with it. First, tracings of the magnified images at the various points in the stitch cycle are made and figured in degrees from the zero position. The Imagegraph is then placed on the other machines, and the end elements are then adjusted according to the tracings at the settings, expressed in degrees on the dial. Finally, the machines are correctly aligned.

Doffing and Inspection

The method that Native uses for doffing fabric is simple and prevents soiling or scuffing. Long, metal trucks lined with Koroseal are placed before the machine. The fabric is loaded into the hamper, and then covered. The next move is to the gray-goods-storage bins to await the first full inspection.

The gray inspection is done over a special frame that has a frosted glass with fluorescent lighting behind. The inspectors, who wear gloves, carefully watch out for various damages that

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1—NEW Stainless Steel Dry Can, 80" face x 72" diameter.
5—Hussong Dyeing Machines, Stainless Steel Lining and sticks. 2 are 325#, 3 are 150# capacity, motor driven.
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2—Fearnaught 48" Ball Bearing Pickers. Late type.
1—Sargent Burr Picker, 48" face, with feed hopper.
1—Van Vlaanderen High Speed 50" Tuber, motor driven.
1—Van Vlaanderen 50" 3-roll Hydraulic Calender, motor driven.
36"", 48"", 60" Extractors, individual motor driven. Rebuilt.
1—King and Gerber 60" face Embosser, Tree Bark Pattern.
1—Textile Finishing Machine Co. 60" x 70" Clip Tenter Frame.
1—Morton 300# Stainless Steel Combination Package Dryer.
1—Whitin 49" Single Process Picker, 2 beater.
Saco-Pettee 11" x 5½" Stubbers, & Saco-Pettee Spinning Frames.
3—51" Single Roll Knife Coaters, Housings, individual drives.
1—Textile Fin. Mach. Co. 51" 3-roll Hydraulic Calender. 70 tons.
15—S.S. Dry Cans 72" face M.D.
1—Saco-Lowell 2-beater picker.
1—Saco-Lowell Vertical Opener.
1—Saco-Lowell F-5 Feeder

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1—W.J. Tenter Frames, 30' x 96"
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1—Set of 21-72" x 23" Dry Cans Horizontally.
2—54" General enclosed gear S. S. lined Dye Jigs.
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1—Set of 7 copper cans, horizontal, Reeves & motor.
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1—64" Van Vlaanderen motor driven Tuber.
1—54" King & Gerber embossing calender, M.D.
2—60" motor driven Beamers.
4—Hermes measuring & inspecting machines tube to tube.
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30-40 gallon copper steam jacketed Kettles.
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2 C & K 100" R. S. 4x4
12 C & K 92" R. S. 4x1 Automatic
18 C & K 4x1 Automatic 82" R.S.
5 C & K 4x4 82" R.S.

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1 Jostrom fabric conditioner 64"
1 14 can Butterworth dryer 142"
1 19 can Butterworth dryer 72"
1 V.V. 60" Quatch
1 Textile Tenter Frame 52" wide 40' long
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30 50" Dry Cans
1 Birch Bros. Scutcher & Vacuum 60"

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9 Atwood Single Deck Utility Spinners
30 Universal Coners #50
8 Sipp Warpers & Winders
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4 Oswald-Grundy 46—Spindle Cop Winders

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3—36" diam. 30" wide between rings Copper Cans.
3—50" Steel Rolls covered with Wool Felt.
2—50" Brass Rolls ¾" thick—14" diam.
34—C.I. Can Gears.
1—70" wide S.S. Box for Jigs.
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1—Simplex Tubing & Doubling Machine.
8—60" Copper Cans.
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9—Raschel Machines—2—90" and 7—72" with 2 Warp Mills and 1—Reeves D Drive—2 Warp Creels, one of Metal new, and one of Wood. All in excellent condition.

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PROVIDENCE, R. I.

are noted on an inspection sheet containing the following information: piece and warp number, style number, length of piece, number of racks, weight of piece. The section for damages lists: ends out, long ends out, pin holes, drag ends, stop marks, needle breaks, black grease and oil marks.

This record eventually goes to the tricot superintendent who can trace the quality in his department and catch the cause of small imperfections that might go unnoticed. Another copy of this report is sent to the Converting Dept. in the New York office where it is used for grading the fabric and for assigning dye lots according to quality.

Another measure that tends to catch trouble before it happens is a monthly record of the long ends out, which is kept according to the knitter. The monthly total is sent to the tricot superintendent who cautions those knitters who have an unduly high record of bad damages.

After the goods have been inspected in the gray and assigned to dye lots, the fabric is shipped to the firm's dyeing plant in strong cartons that are strapped and taped. Extra care is taken that the fabric is not soiled, scuffed, or damaged in transit.

When the fabric is tacked, the operators again watch for imperfections and check damages with the piece ticket. If one piece of fabric appears to have an excessive amount of damage in a run of first-quality fabric, the piece is removed from the lot, and the mill manager is notified.

Another important checkpoint occurs when the goods are dyed. The proper color is of utmost importance considering the fact that this firm dyes the same fabrics in a variety of shades of one color for many customers. A swatch is taken from the batch of fabric in the dye tub by the head dyer who checks it under a matching light. No batch is ever dyed unless the head dyer gives the sample color swatch his "stamp of approval," and his approval is based on special files containing the latest shades for every customer.

Signs Help Quality, Too

Many fabric - quality - promoting signs are used throughout the plant to keep operators constantly conscious of the quality effort. Signs are used to insure that fabric will be properly pinned when it moves into the setting chamber. This same policy is used on other equipment when changing the speed improperly would cause real trouble. A cautioning sign has been placed near the controls to act as a safeguard.

When the fabric leaves the tenter

frame, another inspection takes place, and troubles that might have resulted from dyeing are noted. The fabric width is checked, along with a rapid inspection for shade marks, bow marks, scuff marks (which are avoided by careful polishing of the dye tubs once a week), improper or uneven dyeing, dye stains, and frame tears.

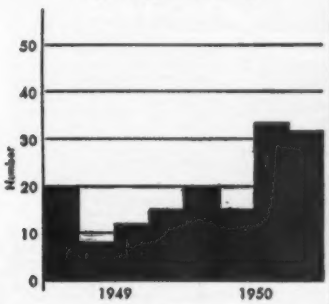
Final inspection occurs when the fabric is drawn over the camelback onto the rolling apparatus. The importance of this last check was recently pointed up when a cross-dyed fabric was produced. It was found that there was a pattern variation caused on the knitting machine because of improper threading. This particular trouble would normally have been located before dyeing. Other imperfections are noted; and as the machine runs much more slowly than the take-off mechanism on the tenter frame, a better check can be made. Again, pieces that might turn out to be trouble-makers on the cutting table are pulled from the lot and management is notified. The piece is then shipped according to its quality, and trouble is averted.

Summing up their climb to quality, management at Native Laces & Textiles reports that in any operation—and at any stage—the human chance for error should be reduced beforehand by careful analysis of danger points through experience.

Pointers for Supervisors

(Continued from page 158)

Fig. 3. Suggestions Pending



suggestions-pending chart (Fig. 3) will indicate how many suggestions are pending unacted upon at the end of each quarter. Too high a figure shows that the servicing of the suggestion needs an overhauling.

Of course, be sure to note the dollar value of the awards made each quarter, and the frequency of each award amount, as, for example, how many $10 awards were made, how many $15 ones, and so on.

PREPARATORY

2—48" Pit Feeds
1—P.&S. 60" Card Feed (Mod. 535—Practically New)
1—Sargent 42" Picker Feed
1—Harwood 48" Picker Feed
2—Sargent 52" Raw Stock Dryers
1—Hunter 7 section Raw Stock Dryer
1—D. & F. 7' all iron Cone Duster
2—Schofield 48" automatic Duster (box)
1—Woonsocket 96" x 96" ceiling condenser & blower
1—"Parkhurst" 48" Burr Picker with Feed
1—D. & F. 48" Fearnaught Mixing Picker
1—D. & F. 40" Mixing Picker, 6 bar
3—Dodge, Schofield 18" x 30" Shoddy Pickers
1—Sargent 36" Duplex Burr Picker
1—Schofield 48" Carding Hair Picker
2—Tolhurst 48" S/S Extractors (New)
1—Draper 2½". 200 Sp. Novelty Twister.

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4—D. & F. or Altemus Warpers—rebuilt to order—82"—120". Pin or Plainer
1—Entwistle Hi Speed 54" Beamer & Creel
1—Globe Ball Warper & Creels
2—Altemus Long Chain Beamers
24—C. & K. W2, 52" 4x1 Looms
4—C. & K. 92" 4x1 automatic Looms
4—C. & K. 52" 4x1 automatic Looms
12—C. & K. 52" (4x4) Box Looms
2—L. & G. Chenille Cutters
1—Terell Mod. K Bobbin Stripper

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1—Foster Mod. 12, Skein to cone Winder, 60 sp.
2—J. & B. Jackwinders, 80 sp. & 120 sp.
10—Lindsay-Hyde Adjustable Skein Reels
2—Whitin Quillers 2½" Gauge (long chain)
1—Lesenby 15 sp. Cop Winder

FINISHING

1—Perkins Cloth Filer, 72" traverse
1—Padder, 72", 2 roll, Hydraulic
2—Birch Bros. Doub. & Tacking Mach. (92")
1—Woonsocket 94" D. A. Napper, 36 rolls
1—P. & W. 68" 4 cyl. Brush & Sander
2—Tenule Gig's, double cylinder (60")
2—Rope Souping Machines (lead lined)
1—Yorkshire Crab 72"—3 bowl
1—S/S Lined 66" Wetting-out Tank with squeeze rolls (Pneumatic Pressure)
2—P. & W. 68" Mod. A Double Shears
2—Voelker 65½" D. B. Presses
2—P. & W. 60" Semi-Decaters
1—Set Dry Cans (4) 27" Copper
1—P. & W. Lancashire 92" Cloth Boarding Machine
1—Windle 68" Cloth Doubler & Meas. Mach.
2—P. & W. 68" Cloth Doub. & Meas. Mach.
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1—11 bowl 50" hydraulic chasing Calender, cotton bowls in excellent condition
1—6 bowl 60" rayon Calender, like new, can be used for friction finishes
3—#2 Nash Pumps with 25 h.p., 550 volt, A.C. motors, mounted on base
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8 Atwood 5 B—for Silk—Motorized.
1 Terrell Bobbin Cleaner.
1 Whitin D.D. Uptwister—H'diess Pkg.
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60M Fibre Winder Spools 3⅛" T. x 3" H.
12M Take Ups-3⅛" T. x 3¼" H. S.S.
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6M Fibre Twist. Spools—4" T. x 3⅛" H.
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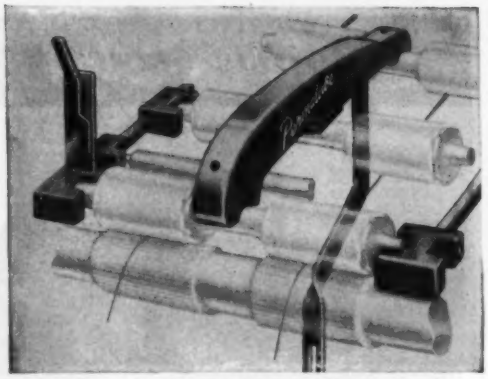

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TEXTILE WORLD

JULY, 1951

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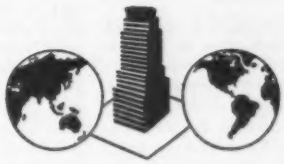

▸ Brief Summaries in Spanish, French, and German of the Major Feature Articles in This Month's Issue

Español

Hemos añadido este suplemento a la edición completa de TEXTILE WORLD de los Estados Unidos en beneficio de nuestros estimados lectores del extranjero. En las columnas siguientes encontrará usted información sobre los artículos importantes que aparecen en las páginas de este número — información que puede ayudarle a aquilatar cada uno de los artículos originales sacándoles mayor provecho en su uso individual.

TEXTILE WORLD espera que estas traducciones breves, al idioma que es más familiar para usted, le sirvan de guía para decidir usted mismo cuáles artículos le conviene traducir por su propia cuenta, dado su interés especial en las diferentes fases de nuestra gran industria textilera mundial. Esas traducciones serán de gran valor práctico para aquellas personas de su organización que tengan dificultades con la terminologia de tejidos del idioma inglés.

Véase la página 3 de las hojas corrientes de este número para la relación completa del contenido en inglés.

Français

Ce supplément a été ajouté à notre édition régulière américaine à l'intention de nos estimés clients d'outre-mer. Dans les colonnes qui suivent vous trouverez des renseignements concernant les articles principaux de ce numéro, renseignements qui vous permettront de juger le l'intérêt que ces articles peuvent avoir dans votre cas particulier.

TEXTILE WORLD espère que ces résumés présentés dans une langue qui vous est plus familière vous permettront de décider quels sont les articles qui vous intéressent suffisamment pour que vous les fassiez traduire plus en long par un traducteur de votre ville. Ces traductions seraient utiles aux membres de votre firme non familiarisés avec la terminologie anglaise de l'industrie textile.

Consultez aussi la Table des Matières, page 3 de ce numéro.

Deutsch

Diese Beilage wurde der vollstaendigen Vereingiten Staaten Ausgabe der TEXTILE WORLD zur Erleichterung fuer unsere geschaetzten Leser in Uebersee zugefuegt. In den nachfolgenden Spalten werden Sie von den wichtigsten Fachaufsaetzen, die in diesem Heft erscheinen, in Kenntnis gesetzt, um Ihnen in der Auswahl der Original Aufsaetze, die fuer Sie von besonderem Interesse sind, behilflich zu sein.

Die TEXTILE WORLD hofft, dass Sie sich durch diese kurzen Uebersetzungen in eine Sprache mit der Sie vielleicht mehr vertraut sind, veranlasst fuehlen, Fachaufsaetze, die von besonderen Interesse auf dem Gebiet der grossen und weltumspannenden Textil Industrie sind, bei lokalen Uebersetzern ausarbeiten zu lassen. Solche Uebersetzungen waeren von praktischem Wert fuer diejenigen in Ihrem Unternehmen, die Schwierigkeiten mit englischen Fachausdruecken haben.

Siehe Seite 3 der Original Ausgabe fuer das vollstaendige Inhaltsverzeichnis in englischer Sprache.

Página 89

Exposición Textilera Internacional de Lille. Este artículo revisa la nueva maquinaria y el equipo exhibido en la Exposición de Lille. Una de las "sensaciones" de la Exposición lo fué la peinadora Whitin modelo J. Otros desarrollos importantes fueron el tratamiento Texylon de solución de silicio para géneros de algodón para aumentar la resistencia contra el desgaste y la fuerza del tejido; diversos dispositivos de torcimiento preliminar; nuevas

Exposition de matériel textile de Lille. L'article passe en revue le nouveau matériel et équipement qui furent exposés à Lille. Le peigneur modèle "J" de Whitin fut un des succès de l'Exposition. La solution de silice Texylon et son application pour augmenter la résistance à l'abrasion et la solidité de tissus de coton, différents dispositifs de pre-torsion, des continus pour filer la laine sur bobines de grande capacité ainsi que des bobinoirs automatiques de Schaerer attirèrent également l'attention de nombreux visiteurs.

Seite 89

Internationale Textilausstellung in Lille. Es werden die bei der Ausstellung in Lille gezeigten neuen Maschinen und Ausruestungen beschrieben. Eines der groessten Erfolge erzielte die Model-J Kamm-Maschine von Whitin. Unter den anderen interessanten Entwicklungen waren die "Texylon" Silica-Loesung, welche fuer die Behandlung von Baumwollfabrikaten bestimmt ist, um deren Staerke und Abschurfwiderstand zu erhoehen; ferner einige Vor-

continuas de hilar lana en paquetes grandes; y una enrolladora automática por Schaerer.

Página 100

Los Hilos Recanillados y la Humedad Ayudan en la Producción de Tejidos. El recanillado de los hilos y la instalación de aparatos humidificadores están mejorando la calidad de los hilos y géneros en una hilatura de Alabama. El costo de recanillar es más que compensado por la producción más elevada permitida por un hilo más limpio. Las agujas duran más también y se pueden regular los mecanismos de paro para menor tensión. La instalación de humidificadores ayuda también al aumento de la producción.

Página 102

Hilatura de Camisetas de Mangas Cortas. La atención a los puntos importantes ha permitido a una hilatura del sur de los E.U.A. reducir los paros de las máquinas y obtener tejidos de alta calidad en su renglón de camisetas de mangas cortas. Esta fábrica no se contenta con seguir las reglas corrientes. En este artículo se describen once "trucos" para hacer frente a la demanda de la competencia.

Página 104

Exposición de Manipulación de Materiales. Se informan las ideas de manipulación de materiales presentadas en la 4ta. Exposición de Manipulación de Materiales, celebrada en Chicago, Ill., E.U.A., que se estiman de utilidad para las hilaturas. Se muestran algunos tipos nuevos de camiones de horquilla que requieren menos espacio de pasillo y que manipulan paquetes sin usar paletas; dispositivos especiales de manipulación de paquetes de tejidos; elevadores y transportadores de capacidad liviana; nuevos tipos de paletas y equipo de amarre.

Página 108

Calidad del Tejido de Tricot. Este artículo describe el sistema usado en Native Lace & Textiles Co. para asegurar la calidad de la tela desde la recepción de los hilos hasta el embarque de los géneros. El hilo es almacenado fuera del piso; las cajas se mantienen selladas; el hilo es inspeccionado antes de usarlo y cuando se coloca en la fileta. En la urdidura, se inspeccionan todas las púas de contacto con el hilo; se vigila la fileta para evitar dificultades, y se utiliza una carretilla especial para manipular el plegador. Los operarios usan guantes de nilón cuando manipulan los géneros. Se utiliza un

Page 100

L'humidification et le rebobinage des fils contribuent à la qualité dans la fabrication de bonneterie. Une usine de l'Alabama a amélioré la qualité de ses produits grâce à l'emploi de dispositifs d'humidification et au rebobinage des fils. L'augmentation de production obtenue grâce au rebobinage compense et au-delà les frais que cette opération occasionne, le fil se présentant mieux grâce à ce rebobinage. Les aiguilles ne doivent plus être remplacées si fréquemment et le réglage des arrêts et casse-fils peut être règlé pour des tensions moindres. L'installation des dispositifs d'humidification contribue également sa part dans l'amélioration du rendement.

Page 102

Tricot pour chemises en "T". L'article décrit comment une usine du Sud a réduit les causes d'arrêts en tricotant du circulaire pour chemises en "T" et amélioré la qualité. Cette usine ne se contente pas de suivre les procédés établis. Onze des moyens dont elle se sert pour lutter contre la concurrence nous sont expliqués.

Page 104

Exposition du Matériel de Manutention. L'article décrit des systèmes de manutention utiles à l'industrie textile, tels qu'ils furent exposés à la 4ème Exposition de la Manutention de Chicago. On put voir des tracteurs électriques d'usine à fourches qui ne nécessitent plus de plateformes mais chargent directement sur les fourches et dont la largeur s'adapte mieux aux passages plus étroits; des modèles conçus pour textiles finis ou en voie de fabrication, des appareils pour manutentions légères, genre courroie sans fin ou ascenseurs, des plateformes d'un dessin nouveau et de nouveaux systèmes d'arrimage adaptés à ces divers appareils de transport.

Page 108

Qualité du tricot indémaillable. L'article décrit le système qu'emploie la firme Native Lace & Textiles pour contrôler la qualité du tricot, partant des matières premières arrivant à l'usine et passant par les différents stages jusqu'à l'expédition du produit fini. Le fil est entreposé dans des locaux spéciaux, les caisses restant fermées. Le fil est inspecté avant son emploi et au moment de le placer sur les cantres. Tous les contacts de fils des cantres sont soigneusement inspectés, le fonctionnement général des cantres fait l'objet d'une surveillance constante, et

richtungen fuer die Vorbereitung von Zwirnen, neue Woll-Ringspinnmaschinen fuer grosse Garnkopse und eine automatische Spulmaschine von Schaerer.

Seite 100

Umgewickeltes Garn und Feuchtigkeit helfen der Strickerei-Erzeugung. In einer Fabrik in Alabama wird durch Umspulen des Garnes und Installation von Befeuchtungsapparaten das Garn und die Strickqualitaet verbessert. Die Kosten des Umspulens werden mehr als wettgemacht, da reineres Garn eine hoehere Produktion gewaehrleistet. Nadeln halten laenger aus und die Abstellvorrichtung kann mit geringerer Spannung eingestellt werden. Einrichtung von Befeuchtungsapparaten hilft auch die Produktion zu erhoehen.

Seite 102

Stricken von Ruderleibchen. Achten auf richtige Einstellung ermoeglicht es einer Strickfabrik im Sueden die Maschinenstillstaende herabzusetzen und bessere Qualitaetsstrickwaren zu bekommen. Diese Fabrik begnuegt sich nicht damit die allgemeinen Regeln zu befolgen. Elf "Tricks," um Konkurrenzanspruechen nachzukommen, werden teilweise angefuehrt.

Seite 104

Materialtransport Ausstellung. Es wird ueber die in der 4. Materialtransportausstellung, Chicago, Ill., gezeigten, der Textilindustrie nuetzlichen Verladearten, berichtet. Gezeigt wurden: Typen von Lastwagen mit Gabelhebevorrichtung, die weniger Gangbreite beanspruchen, welche Packete behandeln ohne Gebrauch einer Drehscheibe, ferner Transportvorrichtungen fuer Stoffpackete, wie Laufbaender und Aufzuege fuer leichte Lasten, neuartige Drehscheiben und Anschnallvorrichtungen.

Seite 108

Qualitaet von Trikotstoffen. In diesem Artikel wird ein System beschrieben, welches die "Native Laces & Textiles" anwendet, um Ia Qualitaetsware, angefangen vom Garn bis zum Verfrachten des Fertigfabrikates, zu erzielen. Garn wird oberhalb des Fussbodens aufbewahrt, Kisten werden versiegelt; das Garn wird vor dem Gebrauch und ehe die Kette geschweift wird, inspiziert. Beim Kettenscheren werden alle Stellen, die mit dem Garn in Beruehrung kommen, untersucht und ein spezieller Karren wird zur Befoerderung des Kettenbaumes verwendet. Arbeiter,

"Imagegraph" para graduar uniformemente todas las máquinas con la misma tela.

Página 111

La Atención a los Desechos del Descargador Ayuda a Eliminar los Botones. El hilo y el género imperfectos es a menudo causado por botones de desechos del descargador. Algunos tipos de manguitos de cilindro superior forman rápidamente rebordes de desecho del descargador. Una causa común de los botones es el arrastre espasmódico de este desecho hacia los cabos. Las condiciones adecuadas y la posición de los descargadores, y los programas adecuados para la remoción del desecho, puede ayudar a reducir los botones de desecho del descargador.

Página 112

Sistemas Centrales de Lavado del Aire. Una hilatura de algodón del sur de los E.U.A. utiliza una serie de unidades individuales lavadoras del aire para los requisitos de humedad relativa y temperatura en muchos de sus procedimientos manufactureros. Se obtiene mejor calidad de producto así como mejores condiciones de trabajo para los operarios. La frescura del aire lavado se estima como un factor muy importante para combatir el cansancio de los empleados en el trabajo.

Página 115

Visita Pictórica a una Moderna Acabaduría. Las características de esta moderna acabaduría son: equipo de oficina de último modelo, buenos métodos de producción, y un transportador de 3.000 pies para manipular los materiales acabados. El equipo de oficina comprende máquinas Multilith para reproducir pedidos en cantidad, equipos microfilmico para consolidar los antiguos archivos, y archivos centralizados de datos del personal. La instalación del transportador ha acelerado los embarques de géneros acabados en dos días, ha eliminado las reparaciones del piso, y ha hecho posible el uso de anteriores secciones de almacenamiento para la producción.

Página 120

Hoja de Datos del Dacron. Una relación concisa pero completa de las propiedades químicas y físicas de la fibra poliestérica Dacron, el nuevo material sintético que produce en cantidades de planta piloto la E. I. du Pont de Nemours & Co., Inc., en su fábrica de Seaford, Delaware.

des trucks spéciaux sont employés pour le transport des ensouples. Les ouvriers qui sont en contact avec le tricot portent des gants de nylon. Un appareil "Imagegraph" est employé pour régler les métiers produisant la même qualité.

Page 111

Vous éviterez les fils boudinés en veillant aux nettoyeurs des cylindres d'étirage. Ce sont souvent les accumulations qui se forment dans ces organes qui sont la cause de fils et de tissus défectueux. Le fil en absorbant par moments ces déchets forme des boutons. Ce genre d'ennuis peut être sérieusement réduit en veillant à l'état et à la position des nettoyeurs et en fixant des périodes régulières de nettoyage.

Page 112

Système de lavage d'air. Une usine de coton du Sud possède une série d'appareils de lavage d'air installés pour le contrôle de l'humidité et de la température dont elle se sert dans les différentes divisions de l'usine. Grâce à ces installations elle a amélioré ses produits et a créé des conditions de travail plus favorables. La fraîcheur de l'air de l'usine est considérée comme un des facteurs essentiels dans la lutte contre la fatigue du personnel.

Page 115

Une usine d'apprêt vue par l'appareil photographique. Une installation de bureau moderne, des méthodes de production très à la page et un tablier sans fin de 3000 pieds de long constituent des points remarquables de cette usine. Parmi le matériel de bureau citons un appareil Multilith pour la reproduction aisée d'ordres de fabrication en de nombreux exemplaires, une installation de photographie Micro-film pour copier les archives et une centralisation des dossiers du personnel. Le système de transport sans fin a acceléré de deux jours l'expédition des marchandises finies, a supprimé les réparations du pavement de l'usine et a permis d'employer pour des usages de fabrication des emplacements nécessités autrefois par le transport des marchandises.

Page 120

Tableau des caractéristiques de la fibre Dacron. L'article donne une liste succinte mais complète des caractéristiques physiques et chimiques essentielles de cette nouvelle fibre synthétique qui est produite en quantités semi-industrielles dans l'usine de Seaford, Delaware, de la Co. du Pont de Nemours.

die mit der Handhabung der Fabrikate in Beruehrung kommen, tragen Nylonhandschuhe. Ein Kontrollapparat "Imagegraph" wird verwendet, um alle am selben Fabrikat arbeitenden Maschinen gleichmaessig einzustellen.

Seite 111

Achten auf Putzwalzenabfall hilft lockere Noppen zu vermeiden. Mangelhaftes Garn und fehlerhafter Stoff wird oefters durch Putzwalzenabfall verursacht. An manchen Arten von Oberwalzen formt sich rasch Reinigungsabfall. Krampfhaftes Zupfen dieses Abfalles vom Faserband, ist die gewoehnliche Ursache der losen Noppenbildung. Guter Zustand und Einstellung der Putzwalzen und zeitgerechtes Reinigen koennen den Putzwalzenabfall vermindern.

Seite 112

Zentral-Luftreinigungs-System. Eine Baumwollfabrik im Sueden hat eine Reihe von individuellen Luftreinigungseinheiten fuer die relative Feuchtigkeit und den Temperaturbedarf fuer viele ihrer Erzeugungsprozesse aufgestellt. Sowohl bessere Qualitaet, als auch bequemere Arbeitsbedingungen wurden erzielt. Man glaubt, dass die Frische der gewaschenen Luft ein wichtiger Faktor in der Bekaempfung von Muedigkeit der Arbeiter ist.

Seite 115

Kamera Tour durch eine moderne Appretur. Moderne Buero Einrichtung, gute Erzeugungsmethoden, und ein 3000 Fuss Transport-Band zur Weiterbefoerderung von fertigem Material, sind Merkmale dieser Appretur. Unter der Buero-Einrichtung gibt es ein "Multilith" Apparat zur Vervielfaeltigung von Auftraegen in Quantitaeten, Mikrofilmaussruestung zum Zusammenfassen alter Aufzeichnungen und zentralisierte Angestellten-Verzeichnisse. Die Transportband-Einrichtung hat das Verfrachten von fertigen Materialien um 2 Tage beschleunigt, Fussbodenreparaturen eliminiert, und machte fruehere Aufbewahrungsraeume zu Erzeugungszwecken frei.

Seite 120

Re: Dacron. Eine kurzgefasste doch komplette Aufzaehlung der wichtigsten physikalischen und chemischen Eigenschaften der "Dacron" Polyester Faser wird gegeben, die ganz neue synthetische Faser in Versuchsquantitaeten von E. I. du Pont de Nemours & Co., Inc., in ihrer Seaford, Del., Fabrik erzeugt wird.

Página 123

Eficiencia en el Molinaje. Para conservar las plantas de molinaje o retorcido a máxima producción, usted debe obtener lo óptimo de cada procedimiento. Existen nueve puntos críticos que afectan la eficiencia y, consecuentemente, a la producción. El artículo trata sobre remojado, extracción, secado, torcedura, enrollado y conservación.

Página 127

Los Directores Tratan de la Conservación. Este informe trata de las cosas discutidas en la reunión de la Sección de Conservación de los Jefes de Operaciones Textileras de Alabama. Los temas cubiertos comprenden revestimientos protectores, metalización, presión de aire para limpieza, mantenimiento del agua fuera de las líneas de aire, operación de los talleres de máquinas de la fábrica, limpieza de lámparas fluorescentes, conservación de motores, lubricación centralizada, limpieza de los sistemas de humidificación, y la reconstrucción de piezas desgastadas.

Página 131

Máquina Anudadora de Urdimbres de Mayor Eficiencia. En una hilatura de estambre de la costa oriental norteña de los E.U.A. se ofreció una demostración de nuevos métodos de anudar urdimbres desarrollados en Dinamarca. La preparación sencilla y rápida del urdimbre redujo el tiempo y el trabajo requerido y aseguró perfecto encruzamiento de extremo a extremo. Se obtuvieron velocidades hasta de 18.000 nudos por hora. Se utilizó un solo tipo de máquina para todas las variaciones de material y números de hilo.

Página 133

Reunión para Control de Calidad. La Asociación Textilera de Control de Calidad celebró recientemente su segunda reunión y en ella se trataron los problemas del control de la calidad. Sobresalieron las discusiones sobre los nuevos desarrollos para el control de calidad estadística, del equipo de abertura y de la gerencia de la fábrica, el efecto de la velocidad del tomador de carda sobre la calidad y sobre el Analizador Shirley.

Page 123

Rendement au moulinage. Pour faire travailler un moulinage à plein rendement chacune de ses divisions doit produire avec le maximum d'efficacité. Neuf points essentiels affectent l'efficacité et par conséquent le rendement de l'usine. L'article traite du mouillage, de l'essorage, séchage, retordage, bobinage et de l'entretien.

Page 127

Des chefs d'usine discutent des problèmes d'entretien. Cet article est un rapport du meeting de la section d'entretien du Groupement du personnel dirigeant d'usines textiles de l'Alabama. L'entretien porta sur les sujets suivants: enduits protectifs, remise en état de pièces usées par le procédé de métallisation, pression recommandée pour les conduites d'air comprimé, suppression des dépôts d'eau dans les conduites d'air comprimé, fonctionnement des ateliers de réparation, nettoyage des installations d'éclairage fluorescent, entretien des moteurs, graissage centralisé, nettoyage des installations d'humidification et utilisation des pièces usées.

Page 131

Concernant une machine de rattachage de chaine plus efficace. Une démonstration fut faite récemment dans une usine de peigné de la Nouvelle-Angleterre, de méthodes de rattachement de chaînes crées au Danemark. Une préparation simple et rapide de la chaîne réduisit le temps et la main-d'oeuvre nécessaire et produisit un rattachage parfait de lisière à lisière. Une production atteignant 18.000 noeuds à l'heure fut atteinte. Un seul modèle de machine fut employé pour tous les genres de fils et tous les numéros.

Page 133

Meeting de l'Association pour le Contrôle de la Qualité des Textiles. Cette association tint son second meeting récemment et discuta du contrôle de la qualité. Cette discussion porta sur les points suivants: nouveaux développements dans le matériel d'ouvraison, direction des usines et contrôle de la qualité par les méthodes statistiques, effet que la vitesse des briseurs de cardes a sur la qualité, appareil analyseur Shirley.

Seite 123

Leistungsfaehigkeit im Zurichten. (Bezieht sich auf Drehen des Seidenfadens). Um Fabriken fuer die Herausnahme des Seidenfadens mit Hoechsterzeugung laufen zu lassen, muss man das Meiste aus jedem Prozess herausbekommen. Es sind 9 kritische Punkte, die die Leistungsfaehigkeit und demzufolge die Erzeugung am meisten beeinflussen. Der Artikel befasst sich mit Einweichen, Extraktion, Trocknen, Zwirnen, Spulen und Instandhaltung.

Seite 127

Betriebsleiter besprechen Instandhaltung. Die Diskussion in der Versammlung der Instandhaltungsgruppe der Fabriksleiter der Textilindustrie von Alabama, wird wiedergegeben, und zwar: Schutzanstriche, Metallisierung, Luftdruck zu Heinigungszwecken, Wasserausschluss bei Luftzufuhren, Fuehrung von Fabriksreparaturwerkstaetten, Reinigung von fluorescent Beleuchtungskoerpern, Instandhaltung von Motoren, zentralisierte Schmierung, Reinigung des Befeuchtungssystems, und Verwendung abgenuetzter Teile.

Seite 131

Leistungsfaehige Ketten-Knuepfmaschine. In einer Kammgarnfabrik in Neu-England wurde unlaengst eine neue Kettenknuepfmaschine (erfunden in Daenemark) vorgefuehrt. Einfache und rasche Vorbereitung der Kette reduziert Zeit und Arbeit und sichert perfektes Knuepfen zu. Geschwindigkeiten bis zu 18.000 Knoten pro Stunde wurden erzielt. Die selbe Maschine wurde fuer verschiedene Materialien und Garnnummern verwendet.

Seite 133

Qualitaetskontroll-Meeting. Die "Textile Quality Assn." hielt unlaengst ihr zweites Meeting und besprach Qualitaetskontrollprobleme. Besprochen wurden Neuerungen der Vorbereitungsmaschinen, Fabriksdirektion und Statistiken ueber Qualitaetskontrolle, Auswirkung der Geschwindigkeit der Krempelreisswalze auf die Qualitaet, und der "Shirley Analyzer".

Sírvase informarnos si le gusta este suplemento.

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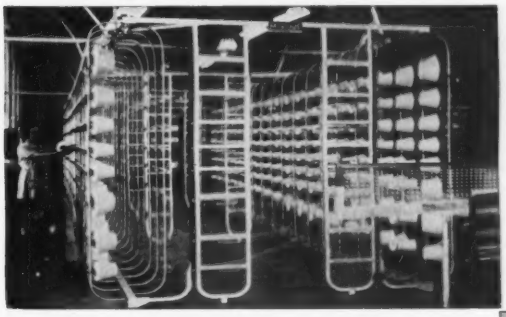

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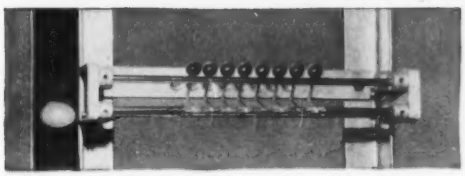

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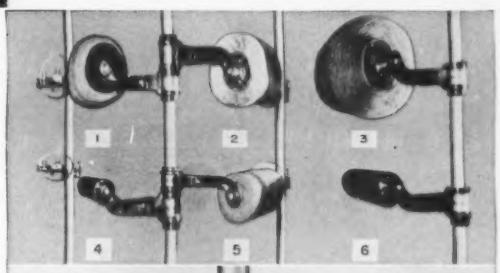

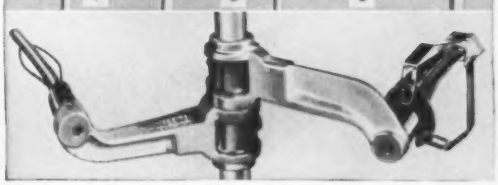

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